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REISSUE LITIGATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re : **Jacques Quellais and Francois Girard**

Group Art Unit: 3728

Application No. : 09/994,059

Reissue of : U.S. Patent 6,079,125

Filed : November 27, 2001

Title : **MULTILAYER SOLE FOR SPORT SHOES**

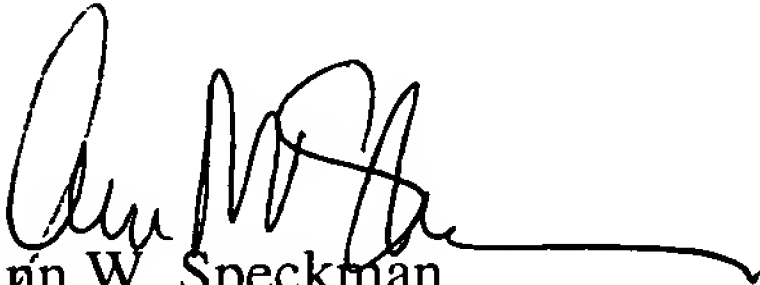
Examiner : Marie Patterson

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U.S. Patent and Trademark Office
Technology Center 3700
Crystal Plaza II, 2nd Floor Reception
2011 South Clark Place
Arlington, Virginia 22202

Attention: Examiner Marie D. Patterson

The attached Protest and the accompanying materials were filed with the U.S. Patent and Trademark Office, via U.S. Postal Service Express Mail, on Friday, May 24, 2002. Because prosecution of the Reissue Application 09/994,059 is expedited, the undersigned is providing a courtesy copy of the Protest and the accompanying materials directly to the Examiner for her information and review.


Ann W. Speckman
Registration No. 31,881
SPECKMAN LAW GROUP

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Date of Deposit: May 24, 2002


Selena Whitaker-Paquet

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PROTEST UNDER 37 C.F.R. 1.291(a)
TRANSMITTAL LETTER

BOX DAC
Commissioner For Patents
Washington, D. C. 20231

Attention: Examiner Marie D. Patterson

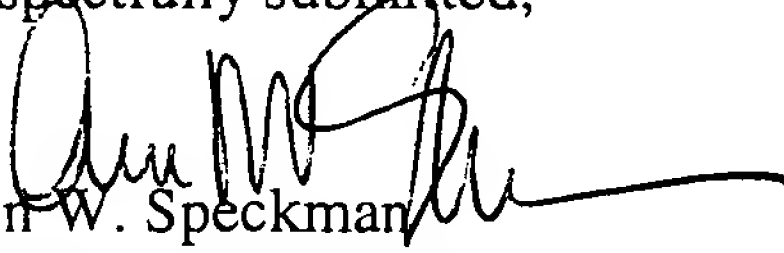
Dear Sir:

Transmitted herewith for filing are the following:

1. Protest Under 37 C.F.R. 1.291(a) w/Exhibits A-E; and
2. Self addressed return receipt postcard.

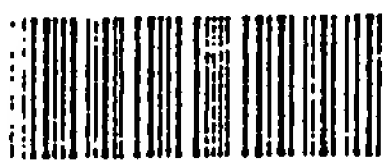
The Commissioner is hereby authorized to charge any additional fees, which may be required in connection with the filing of these documents, or to credit any overpayment, to Deposit Account Number 19-3555. This sheet is filed in duplicate.

Respectfully submitted,


Ann W. Speckman
Registration No. 31,881

Date: May 24, 2002

SPECKMAN LAW GROUP



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Examiner : Marie Patterson

PROTEST UNDER 37 C.F.R. 1.291(a)

BOX DAC

Commissioner For Patents

Washington, D. C. 20231

Attention: Examiner Marie D. Patterson

Dear Sir:

The Rules of Practice provide, at 37 C.F.R. 1.291, that any member of the public obtaining knowledge of an application pending in the Office may file a protest against the application and may call attention to any information within protestor's knowledge which, in protestor's opinion, would make the grant of a patent thereon improper. MPEP 1901, 1901.01 and 1901.02. A Protest specifically identifying the application to which the protest is directed will be entered in the application file if: (1) the protest is submitted prior to the date the application was published or the mailing of a notice of allowance, whichever occurs first; and (2) the protest is either served upon the applicant in accordance with 1.248, or filed with the Office in duplicate in the event service is not possible.

This Protest is directed to U.S. Patent Application No. 09/994,059 (the "Reissue application"), a reissue application of U.S. Patent 6,079,125 (the "125 Patent"). The Reissue

application was filed November 27, 2001 and notice was published in the Official Gazette of the U.S. Patent and Trademark Office on **March 26, 2001**. This Protest is being filed prior to the mailing of a notice of allowance and within the 2-month period following announcement of the filing of the reissue application in the *Official Gazette*. MPEP 1901.04. This Protest, and the accompanying documents, are served upon applicant's representative of record by first class mail as provided by 37 C.F.R. 1.248(4), as evidenced by the accompanying Certificate of Service, attached as *Exhibit A*.

Background and Listing of Information Relied On

'125 Patent Specification and drawings – *Exhibit B*

'125 Patent prosecution history excerpts – *Exhibit C*

Newly added Claims 28 and 29, marked to indicate added and deleted language compared to
'125 Patent Claim 1 – *Exhibit D*

PTO Form-1449 and copies of prior art references cited – *Exhibit E*

Background – '125 Patent and Prosecution History

The parent U.S. Patent Application 07/995,083 was filed Dec. 22, 1992, claiming priority to French patent application 91 16275 filed Dec. 24, 1991. The '083 application was finally rejected, and a file wrapper continuing (FWC) application, Application no. 08/319,096, was filed October 6, 1994. The '125 Patent issued June 27, 2000.

The prosecution history of the '125 Patent is extensive. The claims were ultimately allowed following a decision on Appeal. Exemplary portions of the prosecution history, both before the Examiner and before the Board of Patent Appeals and Interferences, are attached as Exhibit C and discussed in greater detail below.

Claim 1 of the '125 Patent, the only independent claim, reads as follows:

1. In a sport shoe comprising an upper, a sole made from a laminated profile comprising several layers performing distinct functions, respectively, said sole being surmounted by said upper, wherein said sole comprises at least three layers external to said upper, namely:

- (a) a ground contact layer with determinate properties of flexibility, gripping and abrasion-resistance which provide good foot extension, good ground traction and a high level of wear resistance;
- (b) an upper comfort layer located directly beneath the foot, said upper comfort layer having elastic shock-absorption properties and being assembled on said upper of said shoe; and
- (c) an intermediate layer of said sole, arranged directly between an upper part of said ground contact layer, by one of its faces, and the lower part of said

comfort layer by its other face, having controlled torsional and flectional rigidity, and providing both for the distribution of shockwaves and stresses sensed by said ground contact layer and for their diffusion over said comfort layer before coming in contact with the foot, said intermediate layer extending over an entire surface of said ground contact layer and constituting a framework for the ground contact layer preventing deformation of the ground contact layer and thereby permitting it to be made of softer, more adherent rubber.

Much of the prosecution history of the '125 Patent relates to the highlighted language.

Claim 1, as originally filed in the '083 application was the broadest independent claim elected for prosecution in the '083 application, and reads as follows:

1. Sole (2) for sport shoe (2) made from a laminated profile comprising several layers performing distinct functions, respectively, said sole (2) being surmounted by an upper (3) and comprising or not comprising an outer heel-piece (6) in its rear portion, wherein said sole comprises at least three layers external to said upper and arranged in the following manner:

- an outer, or contact, layer (7, 7A, 7B) which exhibits determinate properties of flexibility, gripping, and abrasion-resistance which allow, simultaneously, good foot extension, good ground traction, and a high level of resistance to wear;
- an upper, or comfort layer (8, 8A, 8B) placed directly beneath the foot (4), which exhibits elastic shock-absorption properties and which is assembled directly on a surface of an assembly insole (3a) of said upper (3) or said boot (1), or by means of an assembly insole;
- an intermediate layer or rib (9, 9A, 9B, 9C, 9D, 9E, 9F) of said sole, arranged directly between the upper part of said contact layer (7, 7A, B), by means of one of its surfaces (9a), and the lower part of said comfort layer (8, 8A, 8B), by means of its other surface (9b), and exhibiting controlled torsional and flectional rigidity properties, and which provides simultaneously for the distribution of shockwaves and stresses sensed by said contact layer (7, 7A, 7B) and their diffusion over said comfort layer (8, 8A, 8B), before coming in contact with the foot (4).

Specification, as filed, Claim 1.

Claim 1 was cancelled and Claim 27 added as the sole independent claim in an Amendment filed Feb. 7, 1994. (See Exhibit C.) Newly added claim 27 reads:

27. Sole for sport shoe made from a laminated profile comprising several layers performing distinct functions, respectively, said sole being surmounted by said upper, wherein said sole comprises at least three layers external to said upper, namely:

- (a) a ground contact layer with determinate properties of flexibility, gripping and abrasion-resistance which provide good foot extension, good ground traction and a high level of wear resistance;
- (b) an upper comfort layer located directly beneath the foot, said upper comfort layer having elastic shock-absorption properties and being assembled on said upper of said shoe; and

- (c) an intermediate layer of said sole, arranged directly between an upper part of said ground contact layer, by one of its faces, and the lower part of said comfort layer by its other face, having controlled torsional and flexional rigidity, and providing both for the distribution of shockwaves and stresses sensed by said ground contact layer and for their diffusion over said comfort layer before coming in contact with the foot, *said intermediate layer constituting a framework for the ground contact layer preventing deformation of the ground contact layer and thereby permitting it to be made of softer, more adherent rubber.*

Claim 27, Amendment filed Feb. 7, 1994, emphasis added.

Claim 27 was finally rejected, both on §112 and prior art grounds. An Amendment After Final Rejection was filed and not entered. The Amendment After Final Rejection was subsequently entered in connection with the filing of the FWC application. In the Amendment After Final Rejection (See Exhibit C), subparagraph (c) of claim 27 was amended as follows:

- (c) an intermediate layer of said sole, arranged directly between an upper part of said ground contact layer, by one of its faces, and the lower part of said comfort layer by its other face, having controlled torsional and flexional rigidity, and providing both for the distribution of shockwaves and stresses sensed by said ground contact layer and for their diffusion over said comfort layer before coming in contact with the foot, said intermediate layer extending over an entire surface of said ground contact layer and constituting a framework for the ground contact layer preventing deformation of the ground contact layer and thereby permitting it to be made of softer, more adherent rubber.

Claim 27 Amendment filed September 2, 1994.

In connection with this amendment, Applicants distinguished the Barry prior art reference, U.S. Patent 5,052,130 ("Barry"), as follows:

In Barry, the intermediate layer (20) cannot constitute a framework for the ground contact layer (16) to prevent deformation of the latter. *Such a framework is particularly important at the periphery of the outsole*, which determines the "grip" of the shoe; Figure 4 of the reference clearly shows that the intermediate layer does not extend to the peripheral region.

Page 3, Amendment After Final Rejection filed with FWC application, emphasis added.

The claim limitation reciting the intermediate layer extending over an entire surface of the ground contact layer was thus relied upon to distinguish applicants' claims from Barry. Similarly, in an Amendment filed in August, 1995 in connection with the FWC application, in discussing the application of the Barry and Hannibal U.S. Patent 4,651,445 ("Hannibal"), prior art references, applicants stated:

Applicants agree that Barry shows an outer sole (16) made of rubber, an intermediate layer (spring plate 20) having controlled torsional and flecnional rigidity, and an upper comfort layer (18). *However, the intermediate plate does not extend over the the [sic] entire surface of the ground contact layer and thus does not constitute a framework preventing deformation of the latter permitting it to be made of softer, more adherent rubber. The Examiner states that all three layers of Barry extend across the entire "length" of the composite sole, but claim 27 recites applicants' intermediate layer as extending over the entire "surface" of the ground layer; this is a rather important difference, given the functions of the respective layers.*

In Barry, the intermediate layer (20) does not extend over the entire surface of the ground contact layer (16) ...

Thus, Hannibal does not show the composite layer (30) extending over the entire surface of the ground contact layer (16), since it is located at the narrow top of the tapered assembly, and hence necessarily covers a lesser surface than the ground contact layer.

The attached Exhibit B illustrates the respective layer arrangements of the present invention and of the two references.

Pages 3 and 4 and Exhibit B, Amendment filed August 24, 1995, emphasis added.

Exhibit B, attached to the Amendment filed August 24, 1995 and later attached to Applicants' Brief on Appeal, shows sketches of the Hannibal (Fig. A), Barry '130 (Fig. B) and Salomon (Fig. C) soles, in cross-section at a rear heel portion, highlighting the differences in the intermediate layers. The Hannibal composite layer (30) is positioned above a midsole/wedge (18, 20) and extends, edge-to-edge, over the entire upper surface of the midsole/wedge. As a consequence of the tapered configuration of the sole, however, composite layer (30) has a smaller surface area than that of the ground contact layer (16). The Barry '130 sole is illustrated having the intermediate layer (20) extending only partially over the surface of the ground contact layer 16.¹ Finally, the Salomon sole is shown with intermediate layer (9) extending, edge-to-edge, over both the upper surface of both the ground contact layer (7) and the lower surface of the comfort layer (8).

In an Amendment After Final Rejection filed in connection with the FWC application, applicants again relied upon the extent of the intermediate layer to distinguish the independent claim from the prior art:

It follows that the limitation "*extending over an entire surface of said ground contact layer*" renders applicants' claim 27 non-obvious, inasmuch as it distinguishes not only in terms of structure but also in terms of intended purpose.

¹ It is noted that in the forefoot area, the intermediate layer of Barry would extend over the entire or substantially the entire surface of the ground contact layer.

Page 3, Amendment After Final Rejection filed April 18, 1996, emphasis added.

In their Brief on Appeal, applicants again referred to and submitted Exhibit B (described above and attached in Exhibit C) and stated:

The combination of Barry and Hannibal could not possibly meet the recitation of claim 27 that the intermediate layer extends over the entire surface of the ground contact layer. Moreover, the proposed combination is infeasible inasmuch as the two references contain inconsistent teachings, in that the intermediate layer (20) of Barry is in direct contact with the ground contact layer (16), whereas the composite layer (30) of Hannibal is remote from the ground contact layer (16).

Finally, one of the basic objects of the present invention, namely, to increase the gripping action of the outsole, which is achieved by the intermediate layer in direct contact with the ground contact layer **over the entire surface thereof**, is neither mentioned in the two references nor achievable by the structures disclosed therein.

Page 5, Applicants' Brief on Appeal filed July 15, 1996, emphasis original.

All of the claims were deemed allowable by the Board of Patent Appeals. The decision on Appeal is included in Exhibit C. The Board of Appeals relied on two essential claim limitations and stated:

Barry teaches against having the spring plate 20 "extending over an entire surface of said ground contact layer" as claimed. Barry teaches that the spring plate should not extend to the edge at the front "to prevent the rather sharp edges of the plate from cutting anything or anyone, and to allow adequate adhesive area between the overlying midsole and the underlying outsole in these areas" (citation omitted). Barry teaches that the spring plate should not extend to the edge at the rear because "[i]f the plate extended beneath the outside, i.e., lateral area of the heel, the additional torsional stiffness would increase the rate and degree of pronation, increasing the potential for injury" (citations omitted). ...

While it may be true that the inner sole 30 comprising a composite laminate in Hannibal is structurally similar to the spring plate 20 comprising the composite laminate in Barry, the different order of the layers in Hannibal makes it difficult to see how its teaching are applicable to modifying Barry. The biomechanics of the shoe are clearly going to depend on the order of the layers.

Decision on Appeal, pages 4-5, emphasis added.

The Reissue Application

The Reissue application was filed within two years following issuance of the '125 patent and broader claims may therefore be prosecuted. The Reissue application includes two new claims, Claims 28 and 29. A copy of the Reissue specification, drawings and newly added Claims 28 and 29 is attached as Exhibit B. Exhibit D shows Claims 28 and 29, with the bold and

underlined portions constituting newly added language compared to Claim 1 of the '125 Patent, and the brackets, if any, indicating language deleted from Claim 1 of the '125 Patent.

Applicants alleged that two errors resulted in the patentee claiming more or less than they had a right to claim in the patent. The first error was failure to include new Claim 28, reciting that the intermediate layer extends over **substantially** an entire surface of said ground contact layer, **which is located directly beneath a foot of a person wearing the sport shoe** (*See*, Declaration Under 37 C.F.R. 1.175 and Consent of Assignee, paragraph 8, emphasis added). The second error was failure to include new Claim 29, reciting that the intermediate layer extends over **at least a surface of** said ground contact layer **which is directly beneath a lateral portion of a heel of a person wearing the sport shoe** (*See*, Declaration Under 37 C.F.R. 1.175 and Consent of Assignee, paragraph 9, emphasis added).

In Preliminary Remarks filed with the Reissue Application, Applicants cite support for newly added Claim 28, for example in Figures 7-8 and 15-16. Support for newly added Claim 29 is also cited in the figures, e.g., Figure 5. Applicants allege that reissue recapture estoppel is not present for Claims 28 and 29 since the claims are materially narrower than the scope surrendered during original prosecution. *See*, Preliminary Remarks, page 3.

REMARKS

CLAIMS 28 AND 29 ARE NOT ALLOWABLE

Applicant is attempting to impermissibly recapture, through prosecution of newly added Claims 28 and 29, claim coverage previously surrendered during prosecution.

A reissue application will not be granted to "recapture" claimed subject matter, which was surrendered in an application to obtain the original patent. (Citations omitted.) MPEP 1412.02. The recapture of surrendered subject matter is not the type of correctable "error" contemplated by the reissue statute. *Mentor Corp. v. Coloplast, Inc.* 998 F.2d 992 at 995-96, 27 U.S.P.Q.2d 1521 (1993).

There is a two-step test for determining impermissible recapture. The first step is to determine whether and in what aspect the reissue claims are broader than the patent claims; the second step is to determine whether the broader aspects of the reissue claims relate to subject matter that applicant(s) previously surrendered during the prosecution of the original application. MPEP 1412.02. If the limitation being omitted or broadened in the present reissue was originally presented/argued/stated in the original application to make the claims allowable over a

rejection or objection made in the original application, the omitted limitation related to subject matter previously surrendered by application, and impermissible recapture exists. MPEP 1412.02. Argument(s) alone, without claim amendments, may be sufficient to establish recapture. MPEP 1412.02.

The Reissue claims contain broader aspects.

Claim 1 of the '125 Patent provides the intermediate layer “extending over **an entire surface** of the ground contact layer and constituting a framework for the ground contact layer...” The limitations present in Reissue Application Claims 28 and 29 are unambiguously and significantly broader. The differences between '125 Patent Claim 1, the only independent claim of the '125 Patent, and Reissue Application Claims 28 and 29 are highlighted in Exhibit D.

Claim 28 specifies the intermediate layer “extending over **substantially an entire surface** of the ground contact layer, **which is located directly beneath a foot of a person wearing the sport shoe...**” Claim 29 specifies the intermediate layer “extending over **at least a surface** of the ground contact layer **which is directly beneath a lateral portion of a heel of a person wearing the sport shoe...**” Providing the intermediate layer extending over either “substantially an entire surface” (Claim 28) or over “at least a surface of the ground contact layer which is directly beneath a lateral portion of a heel of a person wearing the sport shoe” (Claim 29) is unquestionably broader than providing that the intermediate layer extends over **an entire surface of the ground contact layer**. The first step for finding impermissible recapture is thus satisfied: the reissue claims are broader than the patent claims.

The broader aspects of the Reissue claims were surrendered.

The second step for finding impermissible recapture requires a determination of whether the broader aspects of the reissue Claims 28 and 29 relate to subject matter previously surrendered. The claim limitation providing the intermediate layer extending over **an entire surface of the ground contact layer** was introduced during prosecution in response to prior art rejection(s). It was repeatedly relied upon to distinguish the independent claim from the prior art. In fact, this limitation was relied upon in no fewer than 15 instances during prosecution, including the appeal. For example, in the Amendment After Final Rejection entered upon filing of the FWC application. Applicants distinguished Barry by the reference's lack of extent of an intermediate layer. The claim limitation providing the intermediate layer extending over **an entire surface of the ground contact layer** was again relied upon by Applicants to distinguish

the claim from the prior art in the Amendment filed April 18, 1996. In the Brief on Appeal, applicants reiterated many of their previous statements and their arguments in favor of patentability were directed to the claim limitation providing the intermediate layer **extending over the entire "surface" of the ground layer**. Finally, the Board of Appeals relied on this limitation in reversing the claim rejection(s). Specific language is cited, above, in the Background section and copies of these materials are provided in Exhibit C.

Protestor also notes that dependent claims reciting limitations relating to an intermediate layer extending over less than the entire surface of the ground contact layer were prosecuted and allowed as '125 Patent Claims 17, 18, 19, 20 and 24. These are precisely the embodiments that Reissue Applicant relies upon to support its Reissue Application Claims 28 and 29. While the subject matter of these claims does not further limit the subject matter of the independent claim, and the validity of these claims is questionable for this reason and in view of various prior art references, this subject matter has been presented and allowed. Reissue Application claims directed to the same subject matter are not allowable.

An error correctable through reissue "does not include deliberate decisions to surrender specific subject matter in order to overcome art, a decision which in light of subsequent developments in the marketplace might be regretted." *Mentor Corp. v. Coloplast, Inc.* 998 F.2d 992 at 996, 27 U.S.P.Q.2d 1521 (July 20, 1993). Moreover, the realm of corrections does not include recapturing of surrendered subject matter "in an attempt to 'custom fit' the reissue claims to a competitor's product." *Pannu v. Storz Instruments Inc.* 106 F. Supp. 2d 1304 at 1309 (July 10, 2000), citing *Hester* at 1483-1484. It is clear that Reissue Application Claims 28 and 29 are not directed to correctable types of error; that they attempt to recapture subject matter previously surrendered; and that these claims 28 and 29, as well as any claims similar in scope, may not be allowed.

The broader aspects of the Reissue Application Claims 28 and 29 relate solely to subject matter previously surrendered. Any claims reciting an intermediate layer extending over less than the entire surface of the ground contact layer contain subject matter that was surrendered during prosecution of the '125 Patent.²

² The Federal Circuit Court of Appeals noted, in a similar circumstance: "[w]e share the district court's discomfort with Williams' attempt to remove, through reissue, the "solely with steam" and "two sources of steam" limitations after having relied so heavily on those limitations to obtain allowance of the original patent claims over the prior art. The Court further noted that the patentee asserted one limitation in no less than 27 places and another limitation in no less than 15 places. *Hester Industries, Inc., v. Stein, Inc.* 142 F.3d 1472 at 1480, 46 U.S.P.Q.2d 1641 (May 7, 1998).

The recapture rule is not avoided by any arguably narrower aspects of the reissue claim.

The Reissue Application Claims 28 and 29 are not materially or substantially narrowed compared to '125 Patent claim 1. The Reissue claim limitations are also not overlooked aspects of the original '125 Patent. A reissue claim that is narrower in scope may escape the recapture rule only if the scope of the claim was previously overlooked. *Hester Industries, Inc., v. Stein, Inc.* 142 F.3d 1472 at 1483, 46 U.S.P.Q.2d 1641 (1998). As explained in *Hester*, where a claim of the original patent contained the limitation, the Applicant cannot argue that the aspect was overlooked during the prosecution of the original patent application. *Id.* In this case, Claim 25 of the original patent application recited: "[s]ole according to claim 1, wherein each of said layers (7,8,9) constituting the sole extends or does not extend over its entire surface." This claim was subsequently cancelled by Applicant in an amendment dated February 7, 1994. Thus, limitations to a layer "extending over less than the entire surface" were presented, and were not overlooked. Presenting the same subject matter in Reissue Application claims does not avoid the recapture rule.

The prior art discloses the invention set out in Reissue Application Claims 28 and 29.

Several prior art references are brought to the attention of the Examiner. Each of the references is cited on the accompanying PTO Form-1449 (Exhibit E) and a copy of each reference is provided.³ (See Exhibit E.) Exemplary teachings of the references are set out below. Some of these references, alone or in combination, may invalidate claims of the '125 Patent. Challenges to the validity of the '125 Patent claims are not addressed.

U.S. Patent 5,052,130, the "Barry Patent" relied upon for rejection of claims during prosecution of the '125 Patent, discloses an athletic shoe with a spring plate extending from beneath the medial portion of the heel region, through the arch region, up to and beneath the toe region, extending substantially the full length of the midsole. Col. 2, lines 10-14. The length of the plate spans substantially the entire length of the midsole. Col. 4, lines 57-58. The plate terminates a small amount from the front and heel ends of the midsole to prevent the rather sharp edges of the plate from cutting anything or anyone. Col. 4, lines 60-63. The spring plate is placed between the outer sole and the midsole. Col. 6, lines 15-16. A preferred configuration of the spring plate is shown in Figs. 4 and 5.

³ Protestor identified additional, potentially relevant prior art references that are not being submitted because English language translations have not yet been obtained. Protestor reserves its right to submit additional relevant prior art references, if appropriate, during the prosecution of the Reissue Application or in any other appropriate forum.

U.S. Patent 5,191,727, another Barry patent, discloses a similar spring plate in the midsole combined with a fluid dynamic pad above the spring plate in the heel region. Col. 1, lines 43-47. The length of the plate spans substantially the entire length of the midsole. Col. 4, lines 18-19. The plate terminates a small amount from the front and heel ends of the midsole to prevent the rather sharp edges of the plate from cutting anything or anyone. Col. 4, lines 21-24.

European Patent Application 0 272 082 discloses a resilient member interposed between an outer and an inner sole for storing and releasing energy during running steps. In some embodiments, the flexible resilient member will extend throughout the foremost two-thirds of the shoe with a heel portion optionally provided with a cushioning material to absorb and distribute shock forces and loads. Col. 5, lines 20-25. In other embodiments, however, the flexible resilient member extends throughout the length of the shoe. Col. 5, lines 25-27, Col. 6, lines 27-32 and Col. 8, lines 27-29.

U.S. Patent 4,854,057 discloses a preformed midsole stiffening formation placed between upper and lower layers of the midsole. The force-dispersing stiffening plate extends throughout and appreciably beyond the regions where major force concentrations usually develop under the wearer's rearfoot and is stiff enough so that it will not deflect to any significant extent under normal loads. Col. 2, lines 42-47. In the illustrated embodiment, the shape of the plate (37) is such that it underlies the wearer's entire rearfoot region and extends forwardly approximately to the first, second and third metatarsal heads to underlie the inside arch, but not the outside arch of the wearer's midfoot. Col. 2, lines 55-60. Figs. 3-7 show various configurations and placements of plate 37.

U.S. Patent 4,651,445, the Hannibal Patent, was relied upon for rejection of claims during prosecution of the '125 Patent. An inner sole (30) is coextensive with the upper portion and midsole and thus supports the foot throughout its length and width. Col. 4, lines 38-41. The inner sole is elongate, substantially planar, and takes on the general outline or profile of the bottom of the foot. Col. 4, lines 48-51.

U.S. Patent 5,720,118 discloses an inlay integrated with a sole by being positioned between an outsole and interior sole. The patent states that it is preferable to design an inlay in such a way that it extends over substantially the entire area of the sole. Col. 5, lines 28-30. The basic inlay extends over the front of the foot, the rear of the foot or over the full extent of the sole of the foot, or only extends over parts of the sole. Col. 7, lines 45-48. Figure 3 shows a basic inlay extending over the entire area of the sole except for through-holes. Spikes, threaded lugs or

inserts may be pushed through the through-holes. Figure 8 shows a basic inlay with recesses in the forefoot and heel regions.

U.S. Patent 5,185,943 discloses an athletic shoe including a midsole and an insert member, the insert member made of a material that is harder than the midsole and positioned to cooperate with the outsole by coacting with the outsole. Col. 2, lines 62-66. The insert member (56) may be positioned in a number of different locations. It is generally either sandwiched between the outsole and the midsole, encapsulated within the midsole or encapsulated within the outsole. Co. 6, lines 20-27. The insert member (56) illustrated in Figs. 1-5 generally has a central body portion (58) and a plurality of insert extensions (60)-(72). Col. 6, lines 44-48. Several embodiments of insert member (90) are illustrated in Figs. 7-15. These embodiments illustrate intermediate layers extending beneath at least a lateral portion of the heel. Figs. 16 and 17 show insert member 120 extending over substantially the entire surface of the outsole.

U.S. Patent 5,042,174 discloses a substantially rigid second layer (14) immediately overlying the rear foot portion of an outsole (12). Col. 1, lines 26-29. The second layer is immediately adjacent to and overlies substantially the entire outsole surface. As illustrated in Figs. 2 and 3, it extends in the area directly beneath a lateral portion of the heel.

U.S. Patent 4,905,382 discloses a reinforcement layer (31) located between an insert (10) and the upper surface (18) of the outsole (14). The outsole upper surface may have a central area that is reticulated or webbed to save weight. Col. 2, lines 63-66 and Col. 3, lines 21-23. The reinforcement layer may thus extend over substantially the entire surface of the outsole. It extends in the area directly beneath a lateral portion of the heel.

U.S. Patent 4,908,964 discloses a fiberboard backing sheet bonded to the lower surface of a midsole between the sock liner and an outsole. The midsole extends from the toe to the heel of the shoe and is fused to the fiberboard backing. Col. 2, lines 16-17. Fiberboard backing (44) is illustrated in Figs. 3-7 as extending over substantially the entire surface, if not the entire surface, of outsole (60). It extends in the area directly beneath a lateral portion of the heel.

European Patent Application 0 329 391 discloses a shoe having an outsole (18), a resilient midsole (20), and a top sole (22). Midsole (20) is shown, in Fig. 2, as being generally coextensive with and extending substantially over the surface of outsole (18). The midsole is described as extending front-to-heel. Col. 3, line 50. It extends in the area directly beneath a lateral portion of the heel.

Canadian Patent Application 2,003,132 discloses an inlay for a shoe sole extending at least in the region of the forefoot, and preferably within the entire area or substantially the entire

area of the sole. *See* Abstract; page 6, second and fifth paragraphs; page 9, third paragraph. The inlay can be used as an inlaid intermediate sole, or as an insole or joined firmly with the sole to integrate it, in stable fashion, with the overall structure of the sole. Page 12, center paragraph. Fig. 1 shows an inlay extending over the entire area of the sole. Figs. 2 and 3 show an inlay with through holes. Figs. 7 and 8 shown inlays with various sizes and configurations of though holes and, in Fig. 7, with a narrowed central portion. In all of these embodiments, the inlay extends over substantially the entire surface area of the sole. In all of these embodiments, an inlay is provided in the area directly beneath a lateral portion of the heel.

U.S. Patent 4,246,708 teaches a sport shoe having a spring plate provided in the sole. The resilient plate extends over essentially the entire length of the shoe sole. Abstract; Col. 1, lines 51-58.

U.S. Patent 4,481,726 discloses a shoe having flexible, semi-stiff layers sandwiching a resilient mid-sole to provide stability to the length and width of the sole over a trailing portion. *See* Abstract. Mildly rigid liner (12) extends substantially the length and width of the sole or tread layer (17). *See* Figs. 1, 3, 5, for example. In another embodiment, an innersole (44) has a layer of cardboard (46) and a layer of inelastic flexible fabric material (47) to provide a stiffness layer. *See*, Fig. 6. Additional embodiments are described and illustrated.

U.S. Patent 5,025,573 discloses a multi-density shoe sole provided with an internal stiffener member. Col. 2, lines 19-37, for example. Figs. 78-82, for example, illustrate a sole construction in which a lower layer (2) is sandwiched between an upper layer (3) and outsole (5). Figs. 83-136 illustrate internal comfort stabilizers (19) having a variety of configurations.

U.S. Patent 5,131,173 discloses an outsole including a "carrier element" of relatively hard material secured to softer sole portions. The carrier element (1) appears to extend over substantially the entire surface of the outsole, if not the entire surface.

U.S. Patent 4,667,423 discloses a midsole having a first interior member constructed of a relatively cushionable material and a second member fabricated of a harder, more resilient material. The midsole is glued, as a unit, to the outsole. Col. 2, lines 3-4. The interior member may extend under the plantar and heel surfaces of the foot or only along a fraction of the length of the sole. Col. 2, lines 68 – Col. 3, line 5.

U.S. Patent 4,439,937 discloses a sole structure in which a stiffener member (20) generally in the form of an elongated plate is encapsulated within a solid body of elastomeric material providing both a ground engaging surface and a foot supporting surface. The stiffener

member has holes formed in it. Col. 2, lines 56-68. The stiffener member extends from the heel to the metatarsal arch region. Col. 2, lines 46-49.

The specification and drawings of U.S. Patent 6,079,125 fail to provide a written description of the invention set out in claims 28 and 29 as required by 35 U.S.C. 112, first paragraph.

The written description requirement of 35 U.S.C. 112, first paragraph, provides that the specification contain a written description of the invention. The written description requirement is separate from the enablement and best mode requirements. The “essential goal” of the written description requirement is to clearly convey the information that an applicant has invented the subject matter, which is claimed, and to put the public in possession of what the applicant claims as the invention.

MPEP 2163 sets out the guidelines for the examination of Patent Applications under the 35 U.S.C. 112, ¶ 1 “Written Description” requirement. The test for sufficiency of support in a parent application is whether the disclosure of the application relied upon “reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter.” MPEP 2163.02, citations omitted. To satisfy the written description requirement, the patent specification must describe the claimed invention in sufficient detail that one skilled in the art can reasonably conclude that the inventor had possession of the claimed invention. Incorporation of new matter violates 35 U.S.C. 132 and 251.

Newly added claims and claim limitations must be supported in the specification through express, implicit, or inherent disclosure. MPEP 2163. The fundamental factual inquiry is whether the specification conveys with reasonable clarity to those skilled in the art that, as of the filing date sought, applicant was in possession of the invention as now claimed. (citation omitted.) MPEP 2163.

The specification of the ‘125 Patent describes a multilayer sole 2 comprising three layers 7, 8, 9 arranged in the following manner: an outer, or contact, layer 7 with properties of flexibility, gripping, and abrasion-resistance which allow, simultaneously, good foot extension, good ground traction, and a high level of resistance to wear; an upper or comfort layer 8 placed directly beneath the upper, 3, and thus the foot, 4, which has elastic shock-absorption properties and which is assembled directly on a surface of the assembly insole 3a of the upper 3 of the boot 1, or by means of an assembly insole (not shown); an intermediate layer or rib 9 of the sole 2, arranged directly between the upper part of the contact layer 7, by means of one of its faces 9a, and the lower part of the comfort layer 8, by means of its other face 9b. This layer 9 exhibits

controlled torsional and flecional rigidity, assuring both distribution of the shock areas sensed by the contact layer 7 and their diffusion over the comfort layer, before contact with the foot 4. See, '125 Patent, Co. 4, lines 30-50. At issue, first in the prosecution history of the '125 Patent, then in patent infringement allegations made by patentee, and now in newly introduced Claims 28 and 29, is the degree or extent to which the intermediate layer or rib 9 covers, or extends over, the surface of the ground contact layer.

Several embodiments of the multilayer sole are described and shown in the '125 Patent. The extent of the intermediate layer or rib 9, as it relates to the interface between and coverage of the surface of the ground contact layer, is not extensively discussed. The only direct reference found in the written description of the specification is at Col. 6, lines 58-60, where the following statement is made: "It should also be noted that each of the layers 7, 8, 9 of the sole 2 may or may not extend over the entire surface of the sole (see, for example, the FIGS. 14 and 15 embodiment).

Furthermore, several figures depict specific embodiments of the intermediate layer. Figs. 1 and 2 illustrate intermediate layer 9 as being generally coextensive with ground contact layer 7 and comfort layer 8. Figs. 5 and 6 illustrate two embodiments of intermediate layer 9 without reference to the ground contact layer. It appears that the intermediate layer 9 is co-extensive, in terms of surface area, with the ground contact layer and the comfort layer, as illustrated in Figs. 1 and 2. Figs. 7 and 8 show a ground contact layer 7 and an intermediate layer 9, with the intermediate layer or rib 9B constituted, at least in the metatarsal area, by a succession of rigid inserts 10. (See, Col. 5, lines 19-30.) This embodiment is claimed in '125 Patent Claims 17 and 18. Figs. 9, 10 and 11 show two embodiments of an intermediate layer 9C and a contact layer 7. It appears that the intermediate layer is co-extensive, in terms of surface area, with the ground contact layer and has recesses for passage of stops. This embodiment is claimed in '125 Patent Claims 19 and 20. In the embodiment of Fig. 12, the intermediate layer is co-extensive, in terms of surface area, with the ground contact layer. Figs. 15 and 16 illustrate embodiments in which the comfort layer 8B is formed by raised projections whose shape corresponds to recesses 16 in the intermediate layer, which they traverse. See, Col. 5, lines 53-61. The intermediate layer is co-extensive, in terms of surface area, with the ground contact layer and has recesses through which the projections traverse. This embodiment is claimed in '125 Patent Claim 24. Fig. 17 illustrates the incorporation of an insert in the intermediate layer; and Fig. 18 illustrates the incorporation of studs in the intermediate layer.

The written description of the specification (including drawings) as filed, appears to support Claim 1 of the '125 Patent, as it relates to **“said intermediate layer extending over an entire surface of said ground contact layer...”** The written description of the specification, as filed, also appears to support dependent claims 17, 18, 19, 20 and 24, directed to disclosed embodiments in which the intermediate layer may not literally extend over the entire surface of the ground contact layer. The specification (including drawings) as filed, however, does **not** describe or support newly added claim 28, particularly as it relates to the “intermediate layer **“extending over substantially an entire surface** of said ground contact layer... (Emphasis added.) Nor does the specification (including drawings) as filed, support newly added claim 29, particularly as it relates to the intermediate layer **“extending over at least a surface of said ground contact layer which is directly beneath a lateral portion of a heel of a person wearing the sport shoe...”** (Emphasis added.)

Reissue applicants cite support in the specification, as filed, for newly added claim 28, reciting the intermediate layer extending over **substantially an entire surface** of said ground contact layer, in Figures 7-8 and 15-16. As mentioned above, the embodiments illustrated in Figs. 7-8 and 15-16 are claimed in the '125 Patent. The written description provided in the '125 Patent, as filed, of two, or possibly three, specific embodiments (that were claimed), does **not** support the recitation of the intermediate layer extending over **substantially** an entire surface of said ground contact layer in newly added Claim 28. The word **substantially** is not used in **any connection** relating to the intermediate layer in the '125 Patent, as it was filed. Aside from the two, possibly three, specific embodiments cited above, there is no indication whatsoever in the specification, as filed, as to how an intermediate layer might extend over **substantially** an entire surface of the ground contact layer. The parent application, the '125 Patent, does not reasonably convey to an artisan that the inventor had possession at that time of the later claimed subject matter. The '125 Patent does not provide a written description of the invention of newly added Claim 28, as required by 35 U.S.C. 112, first paragraph.

Reissue applicants cite support in the specification, as filed, for newly added claim 29, reciting the intermediate layer extending over **at least a surface of said ground contact layer, which is directly beneath a lateral portion of a heel of a person wearing the sport shoe**, in the figures, e.g., Figure 5. Figs. 5 and 6 illustrate two embodiments of intermediate layer 9 without reference to the ground contact layer. It appears that the intermediate layer 9 is co-extensive, in terms of surface area, with the ground contact layer and the comfort layer, as illustrated in Figs. 1 and 2. The intermediate layer extends not only over a surface of the ground

contact layer that is beneath a lateral portion of a heel of a person wearing the sport shoe, but extends over the **entire** surface of the ground contact layer. The parent application, the '125 Patent, does not reasonably convey to an artisan that the inventor had possession at that time of the later claimed subject matter. The '125 Patent does not provide a written description of the invention of newly added Claim 28, as required by 35 U.S.C. 112, first paragraph.

Claims 28 and 29 are not enabled by the '125 Patent Specification.

The specification also does not reasonably provide enablement for an intermediate layer extending over **substantially an entire surface of the ground contact layer** (Claim 28), or for an intermediate layer extending over **at least a surface of said ground contact layer, which is directly beneath a lateral portion of a heel of a person wearing the sport shoe** (Claim 29). The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the invention commensurate in scope with these claims.

Reissue Application does not meet the "original patent" clause of §251 ¶1.

The "original patent" clause of §251 ¶1 requires that the reissue patent be "for the invention disclosed in the original patent." One skilled in the art, upon reading the specification, must be able to identify the subject matter of the new claims as invented and disclosed by the patentees. It is well established that the inquiry as to whether the new reissue claims are for the invention originally disclosed is analogous to the analysis required by §112 ¶1 for the written description rule. *In re Amos* 953 F.2d 613, at 618, 21 U.S.P.Q.2d 1271.

As described in detail above, the specification does not support the intermediate layer extending over **substantially an entire surface of the ground contact layer**, as provided in Claim 28. The word **substantially** is not used in any connection relating to the intermediate layer. Rather, the original specification is far more specific with respect to embodiments of the intermediate layer, as depicted in the various figures. Furthermore, the specification does not support the intermediate layer extending **over at least a surface of the ground contact layer** that is **directly beneath a lateral portion of a heel**, as provided in Claim 29. Nowhere in the specification is the intermediate layer described as extending to the contact layer beneath a lateral portion of a heel.

Newly added claims 28 and 29 are vague and indefinite in violation of 35 U.S.C. 112, second paragraph.

Claims 28 and 29 both include new language. Claim 28, recites the intermediate layer “extending over **substantially** an entire surface of the ground contact layer **which is located directly beneath a foot of a person wearing the sport shoe**, and...” Similarly, Claim 29 recites the intermediate layer “extending over at least a surface of said ground contact layer **which is directly beneath a lateral portion of a heel of a person wearing the sport shoe**, and...” It is unclear, first, in the context of the ‘125 Patent, as filed, what is the meaning and scope of a claim limitation directed to an intermediate layer extending over **substantially an entire surface** of the ground contact layer. The specific embodiments cited to support this language were previously claimed. It is not clear and the use of the term **substantially** renders Reissue Application Claim 28 vague and indefinite.

Moreover, it is unclear whether the newly added language relating to “which is (located) directly beneath a (lateral portion of a heel of) a person wearing the sport shoe” is intended to indicate that the intermediate layer or the ground contact layer is located directly beneath a foot (or a specified part of a heel) of a person wearing the sport shoe. In other words, what component is directly beneath a foot, or a lateral portion of a heel, of a person wearing the sport shoe? This language appears to be opposed to earlier claim limitations in Reissue Application Claims 28 and 29, which both clearly state, in subsection (b), that the *upper comfort layer* is “located **directly beneath the foot**”. (Emphasis added.) Claims 28 and 29 both clearly state, in subsection (c), that the intermediate layer is “arranged **directly between** an upper part of said ground contact layer, by one of its faces, and the lower part of said comfort layer by its other face.” (Emphasis added.) Both the express terms of Claims 28 and 29, and the teachings of the specification of the ‘125 Patent, provide that the upper comfort layer is located directly beneath the foot, and that the intermediate layer is arranged directly between an upper part of the ground contact layer and a lower part of the comfort layer. Consequently, neither the intermediate layer, nor the ground contact layer, may be located directly beneath a foot.

Reissue Application claims 28 and 29 are vague and indefinite in violation of 35 U.S. C. §112, second paragraph.

Conclusion

For the foregoing reasons, Reissue Application Claims 28 and 29, and any claims attempting to introduce limitations providing that the intermediate layer extends over less than the entire surface of the ground contact layer, are not allowable.

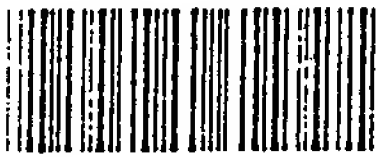
Respectfully submitted,


Ann W. Speckman

Registration No. 31,881

Date: May 24, 2002

SPECKMAN LAW GROUP



20601

PATENT TRADEMARK OFFICE

REISSUE LITIGATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re : **Jacques Quellais and Francois Girard**

Group Art Unit: 3728

Application No. : 09/994,059

Reissue of : U.S. Patent 6,079,125

Filed : November 27, 2001

Title : **MULTILAYER SOLE FOR SPORT SHOES**

Examiner : Marie Patterson

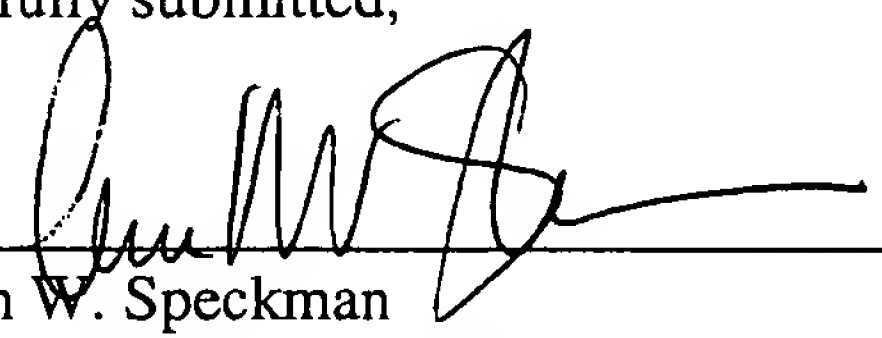
CERTIFICATE OF SERVICE BY MAIL

I **CERTIFY** that on May 24, 2002, I caused to be served, via U.S. first class mail, copies of the **PROTEST UNDER 37 C.F.R. 1.29(a) WITH ATTACHED EXHIBITS**, on the following counsel of record:

Mr. Gregory J. Maier
Mr. Robert T. Pous
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
Crystal Square V, 4th Floor
1755 Jefferson Davis Highway
Arlington, VA 22202

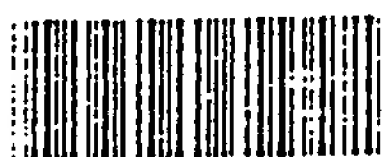
Dated this **24** day of **May**, **2002**.

Respectfully submitted,

By: 
Ann W. Speckman
Registration No. 31,881

Date: May 24, 2002

SPECKMAN LAW GROUP



20601

PATENT TRADEMARK OFFICE



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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GROUP: 240

Applicant: Jacques Quellais et al

Serial No: 07/995,083

Group: 2404 ✓

Filed: December 22, 1992

Examiner: Cicconi

Entitled: MULTILAYER SOLE FOR SPORT SHOES

12/c NZ
RB
9/9/94

Expedited Procedure

AMENDMENT AFTER FINAL REJECTION

Honorable Commissioner of
Patents and Trademarks
Washington, D. C. 20231

ATTN: BOX AF

Sir:

In response to the Office Action dated June 6, 1994, please amend the subject application as follows:

In the Claims

Please amend claim 27 to read:

--27 (amended). Sole for sport shoe made from a laminated profile comprising several layers performing distinct functions, respectively, said sole being surmounted by an upper, wherein said sole comprises at least three layers external to said upper, namely:

(a) a ground contact layer with determinate properties of flexibility, gripping and abrasion-resistance which provide good foot extension, good ground traction and a high level of wear resistance;

ENTER D. Cicconi 1/15/94

14

(b) an upper comfort layer located directly beneath the foot, said upper comfort layer having elastic shock-absorption properties and being assembled on said upper of said [boot] shoe; and

(c) an intermediate layer of said sole, arranged directly between an upper part of said ground contact layer, by one of its faces, and the lower part of said comfort layer by its other face, having controlled torsional and flectional rigidity, and providing both for the distribution of shockwaves and stresses sensed by said ground contact layer and for their diffusion over said comfort layer before coming in contact with the foot, said intermediate layer extending over an entire surface of said ground contact layer and constituting a framework [means] for the ground contact layer preventing deformation of the ground contact layer and thereby permitting it to be made of softer, more adherent rubber.

In claim 35, line 1, change "sole" to --layer--.

In claim 37, line 2, change "the" to --an--.

Remarks

Claims 5 to 18 and 27 to 40 are pending in this application, claims 5 to 18 being withdrawn from consideration.

In paragraph 1 of the action, the Examiner has reiterated his contention that the manufacture of the comfort layer is inadequately disclosed, and has rejected applicants' contention that the materials used are well known to those skilled in the art.

The Examiner's argument ("the mere mention of utilizing an unspecified material for the comfort layer would appear to be insufficient to allow one of ordinary skill in the art to make and use the same without undue experimentation and unreasonable delay") in paragraph 1 is inconsistent with

the argument in paragraph 8:

"It would have been obvious to one of ordinary skill in the art to provide the midsole layer of Barry et al. with zones of varying material properties, as taught by Banich et al." and "it would have been obvious to one of ordinary skill in the art to provide the sole parts of Barry et al., as modified by Banich et al., in an (sic) of a number of known durometer hardnesses".

Thus, in paragraph 8, the Examiner inherently agrees with applicants'

contention that the selection of materials to be used to achieve the required properties of the sole layers is well within the skill of those in the art.

The claims have been amended in response to the Examiner's rejections under 35 USC 112. However, it is not clear why the Examiner considers "i.e., a first zone" in claim 29 to be indefinite; clarification would be appreciated.

As regards the indefiniteness rejection of claim 37, applicants are experiencing difficulty in devising wording which does not mention the sole, but will be glad to consider any wording acceptable to the Examiner.

Finally, with respect to lines 1 to 4 of claim 27, applicants' invention is directed to the sole of a shoe; the upper is mentioned only to indicate the position of this sole.

The Examiner has rejected claims 27, 28, 30, 34 and 36 to 40 under 35 USC 102(e) as being fully met by Barry et al. For the sake of completeness, applicants note that the Examiner failed to specify which of the two Barry et al. citations is being applied to the claims; inspection indicated that it was the '130 patent.

In Barry, the intermediate layer (20) cannot constitute a framework for the ground contact layer (16) to prevent deformation of the latter. Such a framework is particularly important at the periphery of the outsole, which determines the "grip" of the shoe; Figure 4 of the reference clearly shows that the intermediate layer does not extend to the peripheral region.

Claim 27 has been amended to recite that the intermediate layer extends over the entire surface of the ground contact layer. This feature was



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Quellais et al

Serial No: 08/319,096

Filed: October 6, 1994

Entitled: MULTILAYER SOLE FOR SPORT SHOES

Group: 3208

Examiner: Cicconi

RECEIVED

SEP 13 1995

GROUP 3208

AMENDMENT

Honorable Commissioner of
Patents and Trademarks
Washington, D. C. 20231

Sir:

In response to the Office Action dated March 27, 1995, please amend
the subject application as follows:

In the Claims

Please amend the claims as follows:

2/1(twice amended). [Sole for] In a sport shoe comprising an upper, a sole made from a laminated profile comprising several layers performing distinct functions, respectively, said sole being surmounted by [an] said upper, wherein said sole comprises at least three layers external to said upper, namely:

(a) a ground contact layer with determinate properties of flexibility, gripping and abrasion-resistance which provide good foot extension, good ground traction and a high level of wear resistance;

(b) an upper comfort layer located directly beneath the foot, said upper comfort layer having elastic shock-absorption properties and being assembled on said upper of said shoe; and

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(c) an intermediate layer of said sole, arranged directly between an upper part of said ground contact layer, by one of its faces, and the lower part of said comfort layer by its other face, having controlled torsional and flexional rigidity, and providing both for the distribution of shockwaves and stresses sensed by said ground contact layer and for their diffusion over said comfort layer before coming in contact with the foot, said intermediate layer extending over an entire surface of said ground contact layer and constituting a framework for the ground contact layer preventing deformation of the ground contact layer and thereby permitting it to be made of softer, more adherent rubber.

└ In claim 29, line 2, delete "i.e.," in favor of --said zones including--.

W. E. Rule 1.121 In claim 37:

on line 1, delete "each of";

on line 2, delete "extends over the entire surface of said sole" in favor of --are substantially congruous--.

Discussion

Claims 27 to 40 are pending in this application, claims 5 to 18 being non-elected.

Claims 27, 29 and 37 have been amended in order to overcome the indefiniteness rejections under 35 USC 112, second paragraph.

In his 35 USC 112, first paragraph rejection, the Examiner continues to assert that the comfort layer material must be specifically identified. Presumably, this rejection is based on the presence of claim 28, in which the increase in density from the upper to the lower portion of the comfort layer is claimed.

└ It is submitted that conventional structural foams of the kind used in comfort soles can be given a density which varies from their upper to their lower portions due to the so-called "skin effect". Such foams have an external

"skin" which has a greater density than the interior of the foam layer.

The attached Exhibit A shows how the varying density of structural foams can be obtained by controlling the flow of pressurizing gas. Samples of soles containing areas of varying density are also available for presentation at an Office interview, should the Examiner consider this necessary for allowance of the application.

The Examiner has rejected claims 27, 28, 30, 34 and 36 to 40 under 35 USC as being unpatentable over Barry et al.'130 in view of Hannibal.

Applicants agree that Barry shows an outer sole (16) made of rubber, an intermediate layer (spring plate 20) having controlled torsional and flexional rigidity, and an upper comfort layer (18). However, the intermediate plate does not extend over the entire surface of the ground contact layer and thus does not constitute a framework preventing deformation of the latter permitting it to be made of softer, more adherent rubber. The Examiner states that all three layers of Barry extend across the entire "length" of the composite sole, but claim 27 recites applicants' intermediate layer as extending over the entire "surface" of the ground layer; this is a rather important difference, given the functions of the respective layers.

In Barry, the intermediate layer (20) does not extend over the entire surface of the ground contact layer (16) (a) in order to allow adequate adhesive area between the overlying midsole and the underlying outsole (see column 4, lines 60 to 65), and (b) most importantly, to avoid an increase in the rate and degree of pronation, which would increase the potential for injury (see column 5, lines 8 to 11).

The limitations "spring plate being more narrow than the midsole . . . leaving the lateral portion of said outsole in the heel region in engagement with the lateral portion of said midsole in said heel region" are explicitly recited in the independent claims of Barry, and are described in the specification (e.g., at column 2, lines 13 to 20; column 4, lines 60 to 65; column 5, lines 3 to 13; and column 6, lines 42 to 45).

In summary, Barry teaches a rigid elastic layer in contact with the ground contact layer but not extending over the entire surface of the latter in order to avoid the problem of excessive pronation.

Hannibal concerns a composite shoe sole including a composite inner sole (30) at the top of a midsole plus wedge (18, 20) whose thickness diminishes from the heel toward the midfoot and toe region (see Figure 2 and column 4, lines 19 to 23). As correctly noted by the Examiner, Hannibal is also concerned with the lateral stability of the foot, and attempts to address this problem by placing the composite inner sole above the midsole and by tapering the sole assembly inwardly from bottom to top, as shown in Figure 2.

Thus, Hannibal does not show the composite layer (30) extending over the entire surface of the ground contact layer (16), since it is located at the narrow top of the tapered assembly, and hence necessarily covers a lesser surface than the ground contact layer.

The attached Exhibit B illustrates the respective layer arrangements of the present invention and of the two references.

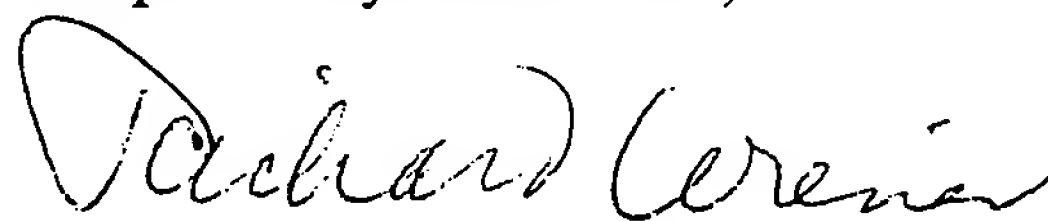
The combination of Barry and Hannibal could not possible meet the recitation of claim 27 that the intermediate layer extends over the entire surface of the ground contact layer. Moreover, the proposed combination is infeasible inasmuch as the two references contain inconsistent teachings, in that the intermediate layer (20) of Barry is in direct contact with the ground contact layer (16), whereas the composite layer (30) of Hannibal is remote from the ground contact layer (16).

Finally, one of the basic objects of the present invention, namely, to increase the gripping action of the outsole, which is achieved by the intermediate layer in direct contact with the ground contact layer **over the entire surface thereof**, is neither mentioned in the two references nor achievable by the structures disclosed therein.

The remaining prior art rejections relate to dependent claims which are allowable together with an allowable main claim.

The claims as now amended are deemed to distinguish patentably over the art of record, and their allowance is accordingly solicited.

Respectfully submitted,

A handwritten signature in cursive script, reading "Richard Wiener". The signature is written in dark ink and is positioned above a horizontal line.

Richard Wiener

Registration No. 18,741

Pollock, Vande Sande & Priddy

1990 M Street, N. W. #800

P O. Box 19088

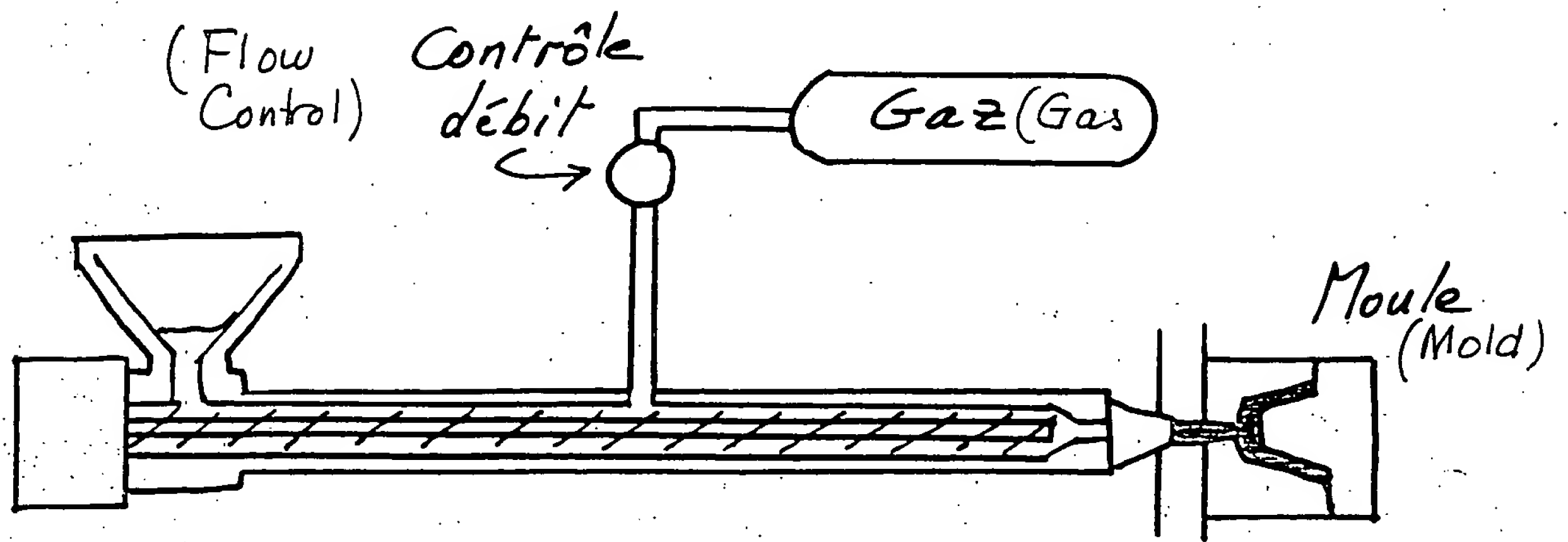
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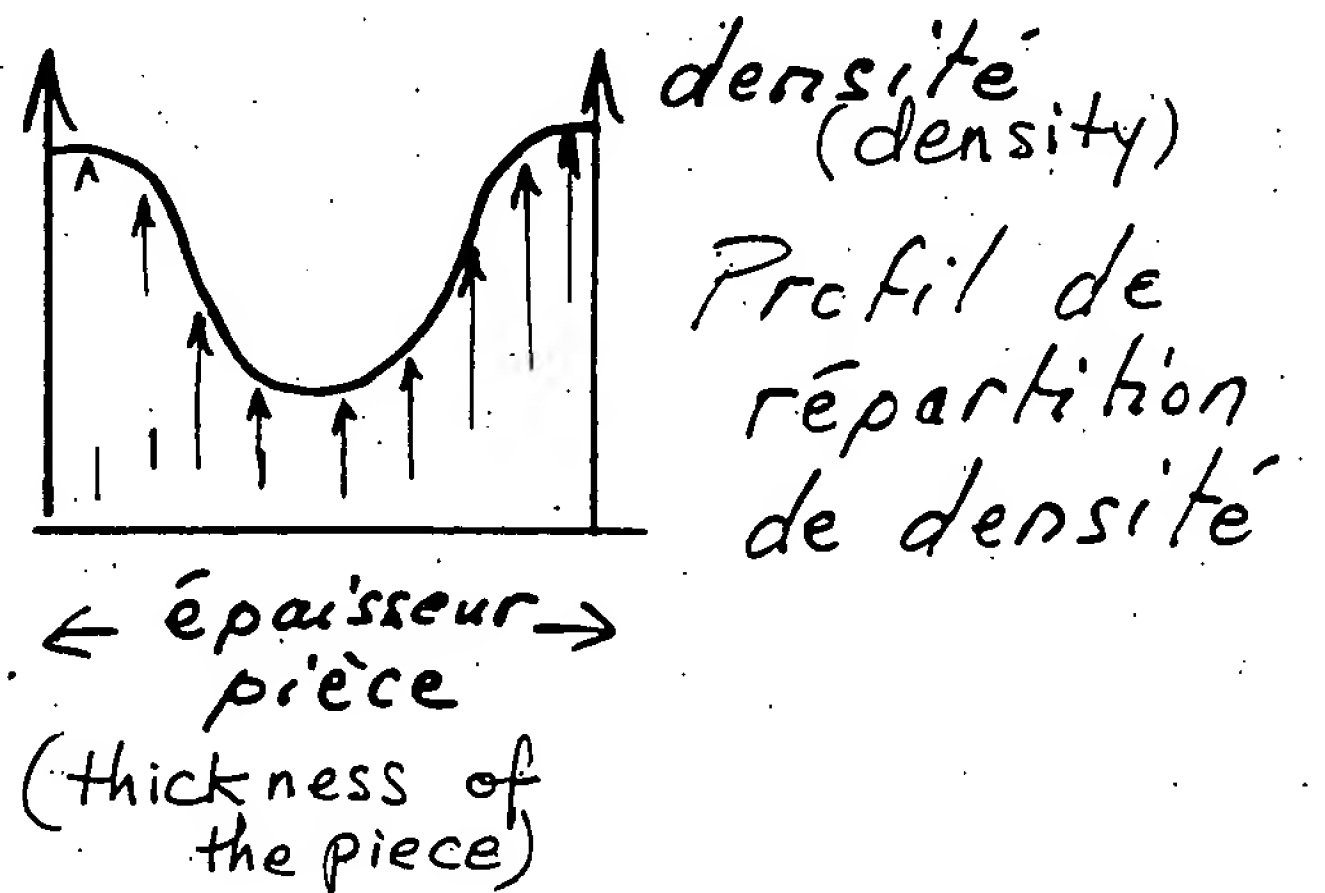
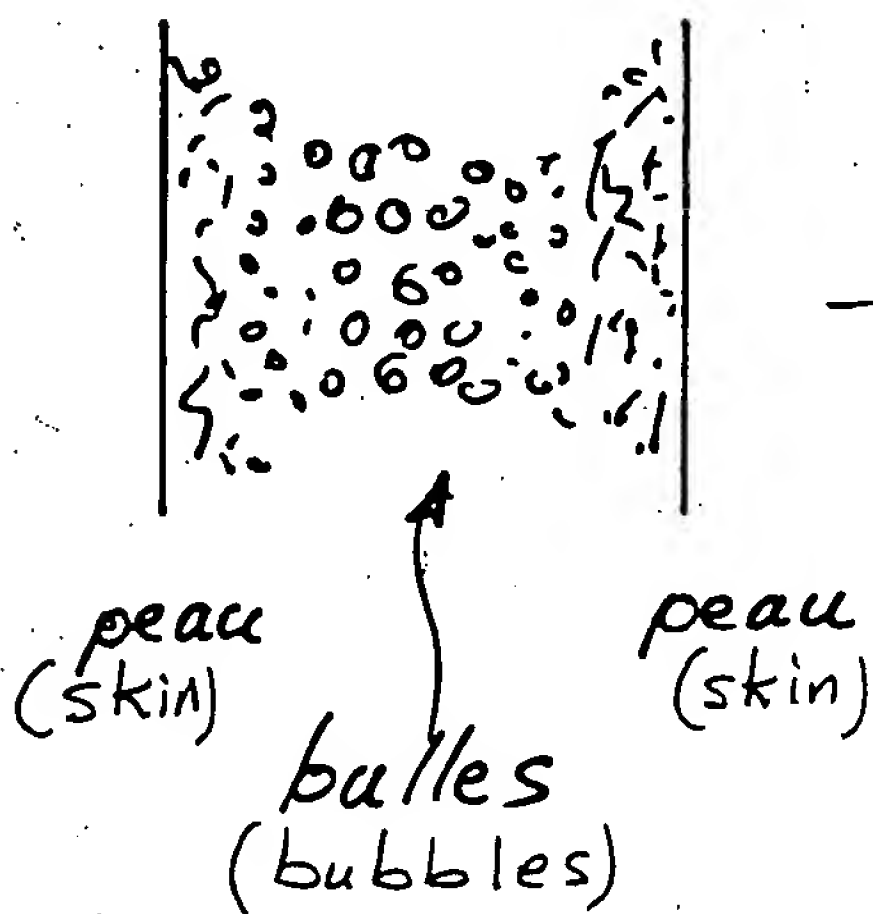
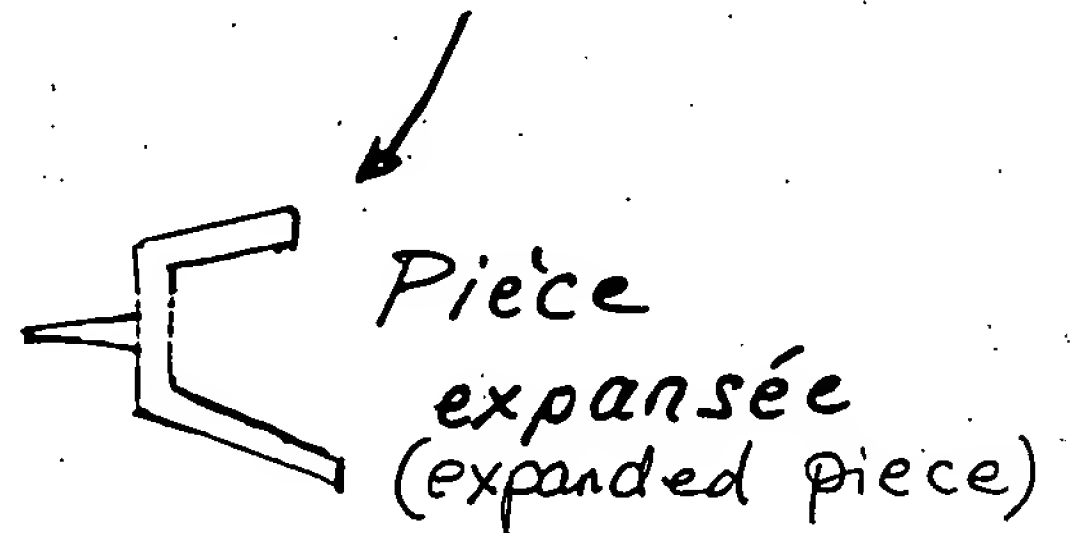
August 24, 1995

Mousses structurales (Structural Foams)

Exhibit A

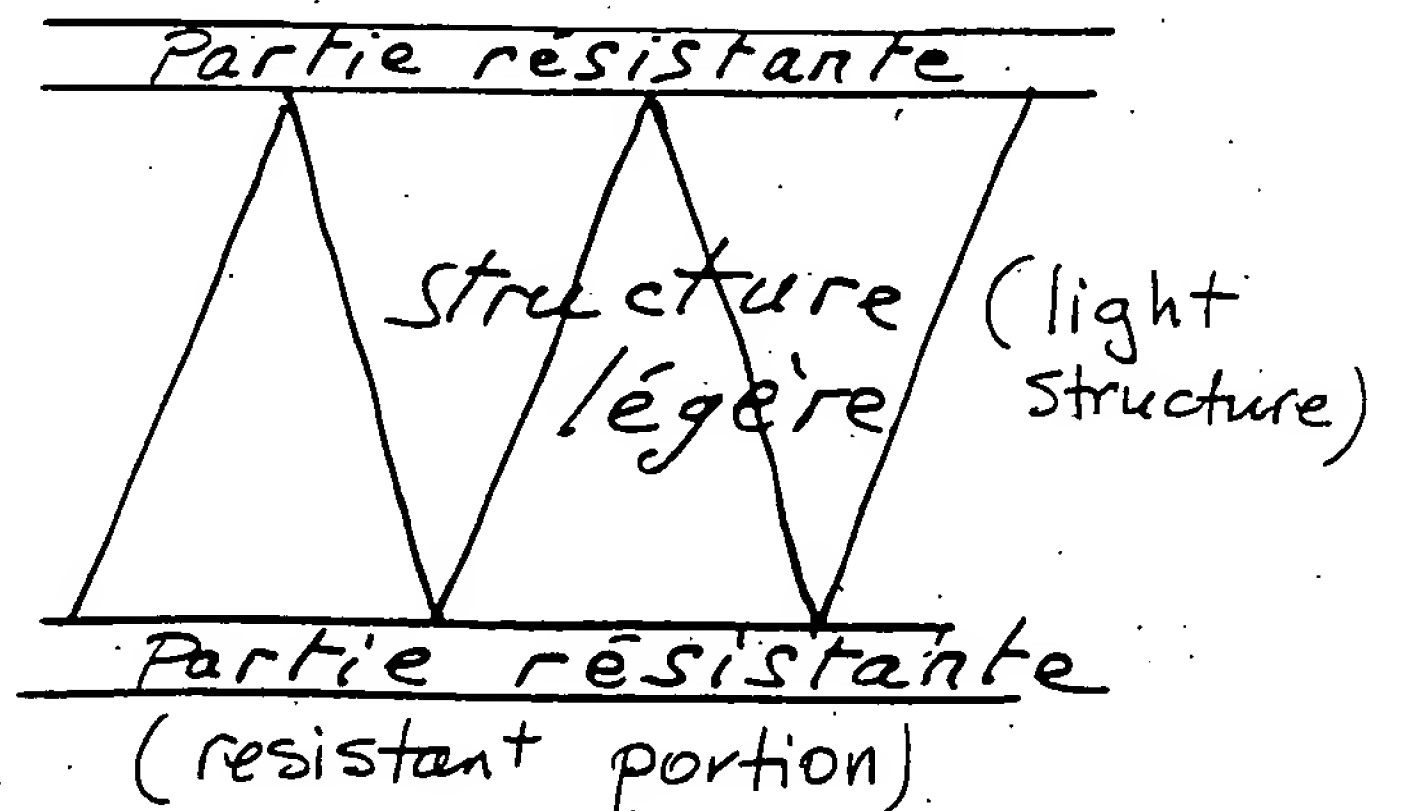


(Section View)
Profil en coupe



analogue à une
poutre

(analog to a beam)



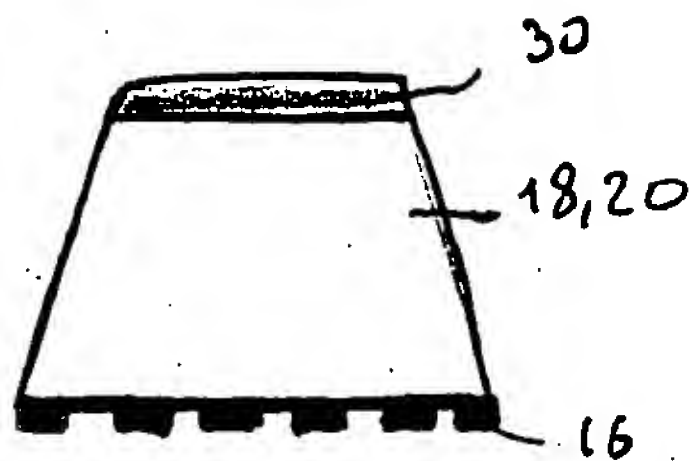


FIG A
HANNIBAL '445

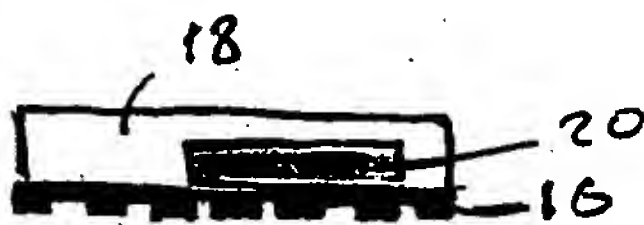


FIG B
BARRY '130



FIG C
SALOMON (Quellais et al.)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Quella et al

Serial No: 08/319,096

Filed: October 6, 1994

Entitled: MULTILAYER SOLE FOR SPORT SHOES



BOX AF
EXPEDITED PROCEDURE

Group: 3208

Examiner: Cicconi

Attorney Docket: 254/126

AMENDMENT FILED UNDER RULE 1.116

Assistant Commissioner for Patents
Washington, D. C. 20231

RECEIVED
APR 18, 1996
APR 25 1996
GROUP 3200

Sir:

In response to the Office Action dated November 21, 1995, please amend the subject application as follows:

IN THE CLAIMS

Cancel claim 28.

Cancel claim 37.

Please add the following claim:

24. Sole according to claim 27, wherein said ground contact layer, said upper comfort layer and said intermediate layer are substantially congruous with one another.--

DISCUSSION

Claims 27, 29 to 36 and 38 to 41 are pending in this application.

The Examiner's objection to the specification and to claim 8 under 35 USC §112, first paragraph is mooted by the cancellation of claim 28.

The Examiner's refusal to amend claim 37 due to alleged non-compliance with 37 CFR §1.121 is traversed, inasmuch as the proposed amendment added only three new words, hence meeting the requirements of 37 CFR §1.121(c)(2). To advance the prosecution, applicants have rewritten the claim more or less as proposed by the Examiner.

The Examiner has maintained unchanged his 35 USC §103 rejection of claims 27, 28, 30, 34 36 to 40, on the ground that applicants' arguments are unpersuasive. The Examiner contends that the fact that the intermediate layer of Hannibal does not extend over the entire surface of the ground contact layer is not dispositive of the obviousness issue, inasmuch as applicants' claim 27 merely requires that the intermediate layer having controlled torsional and flextional rigidity cover the entire surface of the facing layers, and inasmuch as Hannibal obviously teaches that lateral rearfoot stability and pronation reduction may also be achieved in an intermediate layer extending over the entire surface of its facing layers.

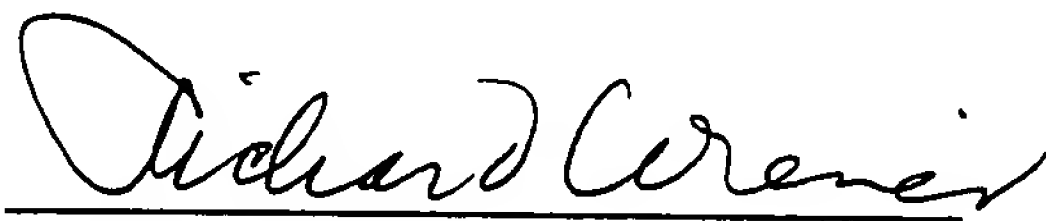
The Examiner's contentions appear to miss the point of the present invention, which provides for an intermediate layer which extends over the entire surface of the ground contact layer in order to (1) assure the distribution of shockwaves and stresses, and (2) provide a framework preventing generalized deformations of the ground contact layer (in the manner of the radial casing of an automobile tire), thereby promoting increased gripping of the ground contact layer and hence a substantial increase in its effectiveness. Such an effect cannot be achieved by the tapered configuration shown in Figure 2 of Hannibal, in which the "intermediate layer" 20 is merely a heel lift which, together with the mid-sole 18, provides cushioning to reduce the vertical impact of heel strike on the foot (see column 4, lines 24-27), in the manner of foam rubber inserts used for heel injuries.

It follows that the limitation "extending over an entire surface of said ground contact layer" renders applicants' claim 27 non-obvious, inasmuch as it distinguishes not only in terms of structure but also in terms of intended purpose.

The Examiner is requested to reconsider his rejection in the light of the foregoing discussion, and to allow the rejected claims over the art of record.

Applicants advise that the enhanced gripping effectiveness of the ground contact layer achieved by the present invention has been proven by tests, the results of which can be made available for the Examiner's review if desired.

Respectfully submitted,



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202-331-7111

THIS OPINION WAS NOT WRITTEN FOR PUBLICATION

The opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.

Paper No. 31

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

MAILED

JAN 27 2000

Ex parte JACQUES QUELLAIS
and FRANCOIS GIRARD

PAT.&T.M. OFFICE
BOARD OF PATENT APPEALS
AND INTERFERENCES

Appeal No. 1997-1268
Application 08/319,096¹

ON BRIEF

Before THOMAS, BARRETT, and LALL, Administrative Patent Judges.

BARRETT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from the final rejection of claims 27, 29-36, and 38-41.

We reverse.

¹ Application for patent filed October 6, 1994, entitled "Multilayer Sole For Sport Shoes," which is a continuation of Application 07/995,083, filed December 22, 1992, now abandoned, which claims the foreign filing priority benefit under 35 U.S.C. § 119 of French Application 91 16275, filed December 24, 1991.

Appeal No. 1997-1268
Application 08/319,096

BACKGROUND

The disclosed invention is directed to a sport shoe comprising an outer sole made up of three layers performing distinct functions.

Claim 27, the sole independent claim, is reproduced below.

27. In a sport shoe comprising an upper, a sole made from a laminated profile comprising several layers performing distinct functions, respectively, said sole being surmounted by said upper, wherein said sole comprises at least three layers external to said upper, namely:

(a) a ground contact layer with determinate properties of flexibility, gripping and abrasion-resistance which provide good foot extension, good ground traction and a high level of wear resistance;

(b) an upper comfort layer located directly beneath the foot, said upper comfort layer having elastic shock-absorption properties and being assembled on said upper of said shoe; and

(c) an intermediate layer of said sole, arranged directly between an upper part of said ground contact layer, by one of its faces, and the lower part of said comfort layer by its other face, having controlled torsional and flectional rigidity, and providing both for the distribution of shockwaves and stresses sensed by said ground contact layer and for their diffusion over said comfort layer before coming in contact with the foot, said intermediate layer extending over an entire surface of said ground contact layer and constituting a framework for the ground contact layer preventing deformation of the ground contact layer and thereby permitting it to be made of softer, more adherent rubber.

The Examiner relies on the following prior art:

Funck	4,399,620	August 23, 1983
Hannibal	4,651,445	March 24, 1987
Banich et al. (Banich)	4,694,591	September 22, 1987
Barry et al. (Barry)	5,052,130	October 1, 1991

Appeal No. 1997-1268
Application 08/319,096

Claims 27, 30, 34, 36², and 38-41 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Barry and Hannibal.

Claims 29 and 31-33 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Barry, Hannibal, and Banich.

Claim 35 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Barry, Hannibal, and Funck.

We refer to the Final Rejection (Paper No. 21) (pages referred to as "FR__") and the Examiner's Answer (Paper No. 28) (pages referred to as "EA__") for a statement of the Examiner's position and to the Appeal Brief (Paper No. 27) (pages referred to as "Br__") for a statement of Appellants' arguments thereagainst.

OPINION

The claims are argued as standing or falling together with independent claim 27. Therefore, we examine the teachings of Barry and Hannibal applied to this claim.

Appellants admit "that Barry shows an outer sole (16) made of rubber, an intermediate layer (spring plate 20) having controlled torsional and flectional rigidity, and an upper comfort layer (18)" (Br3). As shown in figure 4, the spring

² Since claim 36 depends from claim 29, it should be grouped with the rejection of claim 29.

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plate 20 terminates a small amount from the front and heel ends of the midsole "to prevent the rather sharp edges of the plate from cutting anything or anyone, and to allow adequate adhesive area between the overlying midsole and the underlying outsole in these areas" (col. 4, lines 62-65). "The spring plate is tapered down in the rear to extend primarily beneath the medial portion of the heel region, and not significantly beneath the lateral portion of the heel region, leaving the lateral heel area with the lateral outsole portion directly in engagement with the midsole" (col. 2, lines 13-18) which "results in enhanced rear foot stability while maintaining shock absorption of the lateral heel portion of the midsole" (col. 2, lines 19-21). "If the plate extended beneath the outside, i.e., lateral area of the heel, the additional torsional stiffness would increase the rate and degree of pronation, increasing the potential for injury." (Col. 5, lines 8-11.)

Hannibal discloses a composite shoe sole having a multiple ply inner sole 30 at the top of a midsole 14 plus heel lift 20 and an outer sole layer 16.

Exhibit B attached to the amendment (Paper No. 20) filed August 25, 1995, illustrates the respective layer arrangements of the present invention (Quellais et al.) and the two references to Barry and Hannibal.

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Application 08/319,096

The Examiner reasons (FR5): "it would have been obvious to one having ordinary skill in the art to provide the sole construction of Barry et al. '130 with the sole plate of Hannibal in lieu of the sole plate disclosed therein because such stability devices are art recognized equivalents and substituting one for the other provides the shoe of Barry et al. '130 with lateral stability in the rearfoot area and provides high compliance about the forward roll axis while reducing pronation, as taught by Hannibal."

Appellants argue that "the proposed combination is infeasible inasmuch as the two references contain inconsistent teachings, in that the intermediate layer (20) of Barry is in direct contact with the ground contact layer (16), whereas the composite layer (37) of Hannibal is remote from the ground contact layer (16)" (Br5).

We find no motivation in the references to do what the Examiner suggests. Barry teaches against having the spring plate 20 "extending over an entire surface of said ground contact layer" as claimed. Barry teaches that the spring plate should not extend to the edge at the front "to prevent the rather sharp edges of the plate from cutting anything or anyone, and to allow adequate adhesive area between the overlying midsole and the underlying outsole in these areas" (col. 4, lines 62-65). Barry teaches that the spring plate

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Application 08/319,096

should not extend to the edge at the rear because "[i]f the plate extended beneath the outside, i.e., lateral area of the heel, the additional torsional stiffness would increase the rate and degree of pronation, increasing the potential for injury" (col. 5, lines 8-11). The Examiner has not dealt with these teachings against doing what the Examiner proposes. For example, the Examiner states that extending the sole plate in Barry would reduce pronation, which contradicts Barry.

Although it might be said that it would have been obvious to one of ordinary skill in the art to extend the spring plate to the edges if one was not concerned with the factors mentioned by Barry, such analysis seems tinged with hindsight. It would seem that there should be margin between the spring plate and the edges at least to allow an adhesive area.

While it may be true that the inner sole 30 comprising a composite laminate in Hannibal is structurally similar to the spring plate 20 comprising the composite laminate in Barry, the different order of the layers in Hannibal makes it difficult to see how its teachings are applicable to modifying Barry. The biomechanics of the shoe are clearly going to depend on the order of the layers. The composite laminate inner sole 30 is the top layer in Hannibal and clearly has to extend over the entire surface of the mid sole 18 and heel lift 20 to distribute forces thereover. In Barry, the midsole 18 is at

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Application 08/319,096

the top and distributes forces over the composite laminate spring plate 20 and the outer sole 16. We do not find any motivation in Hannibal to place the composite laminate between the outer sole and the midsole as in Barry. Barry teaches that if the composite layer is between the outer sole and the midsole, it should not extend over the entire surface of the outer sole. Therefore, we are not persuaded that it would have been obvious to one of ordinary skill in the art to extend the spring plate 20 in Barry over the entire surface of the outer sole 16, just because Hannibal discloses three layers, each layer of which extend entirely over the layer below.

For the reasons stated above, we conclude that the Examiner has failed to establish a prima facie case of obviousness with respect to independent claim 27. Accordingly, the rejection of claims 27, 30, 34, and 38-41 is reversed.


Banich and Funck do not cure the deficiencies of Barry and Hannibal as to the rejection of claim 27. Accordingly, the rejections of claims 29, 31-33, 35, and 36 are reversed.

Appeal No. 1997-1268
Application 08/319,096

CONCLUSION

The rejections of claims 27, 29-36, and 38-41 are reversed.

REVERSED


JAMES D. THOMAS
Administrative Patent Judge

Lee E. Barrett
LEE E. BARRETT
Administrative Patent Judge

PARSHOTAM S. LALL
Administrative Patent Judge

BOARD OF PATENT
APPEALS
AND
INTERFERENCES

#27

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

Applicant: Quella et al.

Attorney Docket: 254/126

Serial No. 08/319,096

Group: 3208

Filed: October 6, 1994

Examiner: Cicconi

Entitled: MULTILAYER SOLE FOR SPORT SHOES

BRIEF ON APPEAL UNDER 37 CFR §1.192

Assistant Commissioner for Patents
Washington, D. C. 20231

July 15, 1996
(Filed under the next
business day rule.)

Sir:

This is an appeal from the final rejection of claims 27, 29 to 36 and 38 to 41 by the Primary Examiner. Three copies of the rejected claims are attached hereto.

I. Real Party in Interest

The real party in interest is the party named in the caption of this brief.

II. Related Appeals and Interferences

Appellants and their legal representatives and assignee are not aware of any other appeals or interferences which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

III. Status of claims

This is a continuation of U. S. Application Serial No. 07/995,083, filed on December 22, 1992 with claims 1 to 26, of which claims 1 to 9, 12, 13 and 19 to 26 were elected. In addition to the latter claims, the Examiner withdrew claims 5 to 9, 12 and 13 as not corresponding to the elected species.

In response to the Office Action dated October 5, 1993, applicants replaced the remaining elected claims (1 to 4 and 19 to 26) with new claims 27 to 40, which were finally rejected on the merits. The same claims, slightly amended, were filed in the subject continuation application, and were again finally rejected.

IV. Status of Amendments

After final rejection, applicants cancelled claims 28 and 37. The latter claim was reasserted (as new claim 41) to overcome the Examiner's formal rejection.

V. Summary of Invention

As described particularly at page 9, line 2 to page 10, line 14, and as illustrated in Figures 1 to 4 of the drawings, the invention relates to a sport shoe (1) comprising an outer sole (2) made up of several layers performing distinct functions. The lowest or contact layer (7) provides flexibility, gripping and abrasion resistance, allowing good foot extension and ground traction as well as wear resistance. The uppermost or comfort layer (8), which is located directly below the foot, provides elastic shock-absorption, and the intermediate layer or rib (9) provides torsional and flectional rigidity, assuring distribution of shock areas sensed by the contact layer (7) and their diffusion over the comfort layer (8) before contact with the foot. In the elected Figures 1 to 4 embodiment, the comfort layer comprises a highly elastic zone (8a) corresponding to the heel, a zone of medium elasticity (8b) corresponding to the arch, and a third zone (8c) of low elasticity controlling walking.

VI. Issues

A. Does the specification provide an enabling disclosure within the meaning of 35 USC §112, first paragraph?

B. Are claims 27, 30, 34, 36 and 38 to 41 patentable over Barry et al. in view of Hannibal, within the meaning of 35 USC §103?

C. Are claims 29 and 31 to 33 patentable over Barry et al. in view of Hannibal and further in view of Banich et al., within the meaning of 35 USC §103?

D. Is claim 35 patentable over Barry et al. in view of Hannibal and further in view of Funck, within the meaning of 35 USC §103?

VII. Grouping of Claims

The claims listed under each of issues B and C stand or fall together.

VIII. Argument

A. The specification does provide an enabling disclosure within the meaning of 35 USC §112, first paragraph.

The Examiner asserts that the material of applicants' comfort layer (8) must be specifically identified, inasmuch as the mere mention of an unspecified material is insufficient to allow those of ordinary skill in the art to make and use the same without undue experimentation and unreasonable delay. The Examiner denies that the materials provided by applicants by way of example achieve the claimed gradual increase in density.

It appears that this rejection is mooted by the cancellation of claim 28, which recites the comfort layer material.

B. Claims 27, 30, 34, 36 and 38 to 41 are patentable over Barry et al. in view of Hannibal, within the meaning of 35 USC §103.

Applicants agree that Barry shows an outer sole (16) made of rubber, an intermediate layer (spring plate 20) having controlled torsional and flectional rigidity, and an upper comfort layer (18). However, the intermediate plate does not extend over the entire surface of the ground contact layer and thus does not constitute a framework

preventing deformation of the latter permitting it to be made of softer, more adherent rubber. The Examiner states that all three layers of Barry extend across the entire "length" of the composite sole, but claim 27 recites applicants' intermediate layer as extending over the entire "surface" of the ground layer; this is a rather important difference, given the functions of the respective layers.

In Barry, the intermediate layer (20) does not extend over the entire surface of the ground contact layer (16) (a) in order to allow adequate adhesive area between the overlying midsole and the underlying outsole (see column 4, lines 60 to 65), and (b) most importantly, to avoid an increase in the rate and degree of pronation, which would increase the potential for injury (see column 5, lines 8 to 11).

The limitations "spring plate being more narrow than the midsole . . . leaving the lateral portion of said outsole in the heel region in engagement with the lateral portion of said midsole in said heel region" are explicitly recited in the independent claims of Barry, and are described in the specification (e.g., at column 2, lines 13 to 20; column 4, lines 60 to 65; column 5, lines 3 to 13; and column 6, lines 42 to 45).

In summary, Barry teaches a rigid elastic layer in contact with the ground contact layer but not extending over the entire surface of the latter in order to avoid the problem of excessive pronation.

Hannibal concerns a composite shoe sole including a composite inner sole (30) at the top of a midsole plus wedge (18, 20) whose thickness diminishes from the heel toward the midfoot and toe region (see Figure 2 and column 4, lines 19 to 23). As correctly noted by the Examiner, Hannibal is also concerned with the lateral stability of the foot, and attempts to address this problem by placing the composite inner sole above the midsole and by tapering the sole assembly inwardly from bottom to top, as shown in Figure 2.

Thus, Hannibal does not show the composite layer (30) extending over the entire surface of the ground contact layer (16), since it is located at the narrow top of the

tapered assembly, and hence necessarily covers a lesser surface than the ground contact layer.

During the prosecution, applicants submitted an exhibit (B) illustrating the respective layer arrangements of the present invention and of the two references.

The combination of Barry and Hannibal could not possibly meet the recitation of claim 27 that the intermediate layer extends over the entire surface of the ground contact layer. Moreover, the proposed combination is infeasible inasmuch as the two references contain inconsistent teachings, in that the intermediate layer (20) of Barry is in direct contact with the ground contact layer (16), whereas the composite layer (30) of Hannibal is remote from the ground contact layer (16).

Finally, one of the basic objects of the present invention, namely, to increase the gripping action of the outsole, which is achieved by the intermediate layer in direct contact with the ground contact layer over the entire surface thereof, is neither mentioned in the two references nor achievable by the structures disclosed therein.

- C. Claims 29 and 31 to 33 are patentable over Barry et al. in view of Hannibal, further in view of Banich et al., within the meaning of 35 USC §103.

Claims 29 and 31 to 33 are all dependent on claim 27, which applicants regard as containing allowable subject matter.

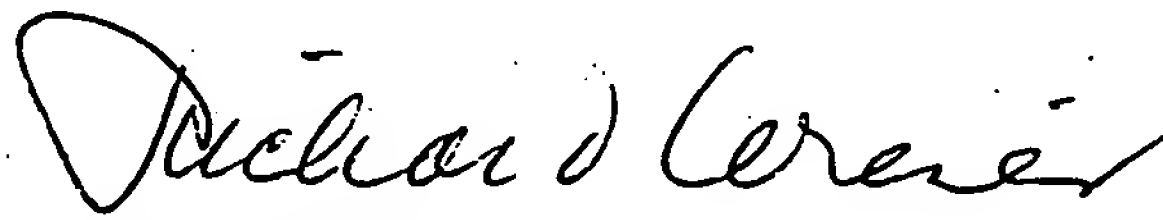
- D. Claim 35 is patentable over Barry et al. in view of Hannibal, further in view of Funck, within the meaning of 35 USC §103.

Claim 35 is dependent on claim 27, which applicants regard as containing allowable subject matter.

IX. Prayer

The Board is respectfully requested to remand the subject application to the Primary Examiner with the direction to allow all of the appealed claims.

Respectfully submitted,



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202-331-7111

X. Claims on Appeal

27. In a sport shoe comprising an upper, a sole made from a laminated profile comprising several layers performing distinct functions, respectively, said sole being surmounted by said upper, wherein said sole comprises at least three layers external to said upper, namely:

(a) a ground contact layer with determinate properties of flexibility, gripping and abrasion-resistance which provide good foot extension, good ground traction and a high level of wear resistance;

(b) an upper comfort layer located directly beneath the foot, said upper comfort layer having elastic shock-absorption properties and being assembled on said upper of said shoe; and

(c) an intermediate layer of said sole, arranged directly between an upper part of said ground contact layer, by one of its faces, and the lower part of said comfort layer by its other face, having controlled torsional and flectional rigidity, and providing both for the distribution of shockwaves and stresses sensed by said ground contact layer and for their diffusion over said comfort layer before coming in contact with the foot, said intermediate layer extending over an entire surface of said ground contact layer and constituting a framework for the ground contact layer preventing deformation of the ground contact layer and thereby permitting it to be made of softer, more adherent rubber.

29. Sole according to claim 27, wherein said comfort layer is composed of several distinct adjoining zones, said zones including a first zone corresponding to the heel and having a first degree of elasticity; a second zone corresponding to the arch and having a degree of elasticity less than said first zone; and a third zone having a degree of elasticity less than said second zone and promoting control of walking.

30. Sole according to claim 27, wherein said intermediate layer has a substantially constant rigidity at all points, said rigidity being selected during manufacture as a function of intended use of the shoe.

31. Sole according to claim 27, wherein said intermediate layer has a hardness greater than 45 Shore D.

32. Sole according to claim 27, wherein said ground contact layer has a hardness of less than 45 Shore D.

33. Sole according to claim 27, wherein said comfort layer has a hardness of less than 80 Shore A.

34. Sole according to claim 27, wherein said ground contact layer is made of rubber having traction and abrasion-resistance properties.

35. Sole according to claim 27, wherein said ground contact sole is made of a thermoplastic material.

36. Sole according to claim 29, wherein said intermediate layer is made of a material selected from the group consisting of filled and unfilled thermoplastic material.

38. Sole according to claim 27, wherein said layers constituting said sole are connected by adhesive bonding.

39. Sole according to claim 27, wherein said layers constituting said sole are connected by duplicate molding.

40. Sole according to claim 27, wherein said layers constituting said sole are connected by ultrasound.

41. Sole according to claim 27, wherein said ground contact layer, said upper comfort layer and said intermediate layer are substantially congruous with one another.

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Jacques Quellais et al.

Serial No: 07/995,083

Group: 2404

Filed: December 22, 1992

Examiner: Cicconi

Entitled: MULTILAYER SOLE FOR SPORT SHOES

AMENDMENT

Honorable Commissioner of
Patents and Trademarks
Washington, D. C. 20231

Sir:

In response to the Office Action dated October 5, 1993, an extension of time for which is herewith filed, please amend the subject application as follows:

In the Specification

On page 1:

on line 4, change "using" to --with--;

on line 9, delete "designed most notably" and insert therefor --particularly intended--;

on line 22, delete "in order to be able to walk" in favor of --to permit walking--.

On page 2:

on line 4, delete "whether" in favor of --even if only--; delete "or" in favor of --,--;

on line 5, delete "not,";

on line 23, delete ", extending from bottom to top,".

On page 3:

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94 FEB 22 PM 2:35
GROUP: 2404

on line 1, after "boot" insert --,--; delete "-" between "currently" and "marketed";

on line 2, delete "by virtue of the fact" in favor of --in--;

on line 7, delete "to the sole a very high" in favor of --excessive--;
after "rigidity" insert --to the sole--;

on line 10, after "In" insert --French--; change "Applicant has" to --applicants have--;

on line 17, delete "existing as" in favor of --in the form of--;

on line 22, delete "configured so as" in favor of --designed--.

On page 4:

on line 6, change "stiffness" to --stiffener--;

on line 9, delete "-" between "ground" and "traction", and "abrasion" and "resistance";

on line 11, change "flexible" to --supple--;

on line 19, change "least" to --minimal--;

on line 22, delete "surmount" in favor of --overcome--.

On page 5:

on line 14, delete ":" in favor of --, by--;

on line 15, change "disturb" to --disturbing--;

on lines 16 and 18, change "cut" to --cutting--;

on line 19, change "restore" to --restoring--;

on line 20, delete "-flow" in favor of --circulation--;

on line 22, change "short" to --sport--;

on line 24, delete "comprising, or not comprising," in favor of --optionally comprising--.

On page 6:

on line 2, delete "which exhibits" in favor of --with--;

on line 6, delete "placed" in favor of --located--;

on line 12, delete "surfaces" in favor of --faces--;
on line 13, delete "surface" in favor of --face--;
on line 14, delete "properties";
on line 19, delete "several" in favor of --more--; change "gives" to -
--provides--;
on line 21, delete ", which" in favor of --; this--.

On page 7:

on line 1, delete "efficiency" in favor of --effectiveness--;
on line 2, delete "of the fact that";
on line 6, delete "as does" in favor of --in the manner of--;
on line 18, delete "show in a" in favor of --are--; change "view" to
--views--;
on line 21, delete "in the drawing";
on line 23, after "respectively," insert --two embodiments of--;
on line 24, delete "obtained according to different" and insert
therefor --;--;
delete line 25.

On page 8:

on line 1, delete "show, in" in favor of --are--; delete "in";
on line 2, change "view" to --views--; before "an" insert --of--;
on line 3, delete "on the" in favor of --);--;
delete line 4;
on line 6, after "respectively," insert --two embodiments of--;
on line 8, delete entire line in favor of --molding (the comfort--;
on line 11, delete "according to" in favor of --with--;
on line 12, delete "diagrammatic" in favor of --schematic--; after
"bottom" insert --plan--; after "of" insert --a special embodiment of--;
delete line 13 in favor of --layer;--;
on line 14, after "bottom" insert --plan--; after "of" insert --another

embodiment of--; after "layer" insert --;;

delete line 15;

on line 16, change "illustrated" to --illustrate--.

On page 9:

on line 2, change "as" to --in--;

on line 3, delete "referenced in its entirety";

on line 6, change "closing" to --closure--;

on line 7, delete "-piece";

on line 8, change "incorporates" to --has--; delete "such" and "that";

on line 10, delete "respectively";

on line 14, delete "which exhibits" in favor of --with--;

on line 18, delete ",";

on line 19, delete "exhibits" in favor of --has--;

on line 25, change "surfaces" to --faces--;

on line 26, change "surface" to --face--.

On page 10:

on line 1, delete "properties" and "this";

on line 2, delete "stiffness providing simultaneously for the" in favor of --assuring both--;

on line 4, delete "coming in";

on line 6, delete "having" in favor of --of--;

on line 9, delete "According to a special" in favor of --In the--;

on line 11, after "zones," insert --namely,--;

on line 15, delete "special";

on line 22, delete "whose" in favor of --having different--; delete "are different";

on line 23, delete "and";

on line 26, delete "formed from one" in favor of --constituted by

a--.

On page 11:

- on line 4, delete "Or again, for" in favor of --For--;
- on line 5, delete "formed" in favor of --constituted--;
- on line 6, delete "from" in favor of --by--;
- on line 10, delete the entire line in favor of --The rib layer 9 may also be made of a--;
- on line 13, delete "simultaneously, in particular" in favor of --both--;
- on line 16, delete "According to a special" in favor of --In the--;
- delete ",";
- on line 17, before "in" insert --(--; change "not shown" to --omitted)--;
- on line 18, delete "," (first and second occurrences);
- on line 20, delete "said" in favor of --the--.

On page 12:

- on line 2, delete "According to another" in favor of --In the--;
- on line 3, delete "," (second and third occurrence); delete "in proximity to" in favor of --near--;
- on line 4, delete "arc-shaped" in favor of --arcuate--;
- on line 6, after "allowing" insert --the--; delete "formed" in favor of --projecting--;
- on line 7, delete ","; delete "on the" in favor of --having--; delete "of" (first occurrence) in favor of --to--;
- on line 9, delete ", moreover, of the";
- on line 10, delete "fact";
- on line 18, change "figure" to --Figure--; delete "shows";
- on line 19, before "comfort" insert --rear portion of the--; delete ", in its rear portion,"; delete "-";
- on line 20, delete "piece" in favor of --portion--; delete "produced

as one piece" in favor of --unitary--; delete "this";

on line 21, delete "outer" in favor of --external--; delete "-piece--";

on line 24, after "variant" insert --,--; change "Figure" to --
Figures--;

on line 25, after "layer" insert --is--.

On page 13:

on line 1, delete ",";

on line 2, delete "," (first occurrence); delete "pass through" in
favor of --traverse--; delete "a value" in favor of --an amount--;

on line 15, delete "a special embodiment of";

on line 16, change "formed" to --constituted--.

On page 14:

on line 2, change "height" to --depth--;

on line 3, delete "These skids" in favor of --Skids--;

on line 6, delete "According to an example of" in favor of --In--;

on line 10, after "binding" insert --optionally--; delete "or not
comprising";

on line 11, delete "strengthening" in favor of --reinforcement--;

on line 12, delete "this";

on line 13, after "in" insert --French--;

on line 16, delete "," (second and third occurrences);

on line 19, delete "this rigid"; delete "(example not" in favor of -
---;

on line 20, delete entire line;

on line 21, delete the entire line in favor of --In an application of
the invention to golf shoes--;

on line 22, after "the" insert --lower part of--; after "layer" delete

"," in favor of --is provided with threaded holes 22--; after "rib" delete ",";

delete "allows" in favor of --for the--;

on line 24, delete ~~entire line~~ in favor of --configuration--;
delete line 25.

On page 15:

- on line 3, delete "," after "layer";
- on line 11, change "possessing" to --with--;
- on line 15, delete "," after "layer" and "rib";
- on line 16, delete "a";
- on line 17, delete "by a";
- on line 21, delete "can" in favor of --may or may not--; delete "(or not extend)";
- on line 22, delete "embodiment in"; after "15" insert --embodiment--;
- on line 23, change "can" to --may--;
- on line 24, change "using" to --by--.

In the Claims

Please cancel claims 1 to 4 and 19 to 26, and add the following claims:

Sub E
"2"
F1
27. Sole for sport shoe made from a laminated profile comprising several layers performing distinct functions, respectively, said sole being surmounted by an upper, wherein said sole comprises at least three layers external to said upper, namely:

2
A
(a) a ground contact layer with determinate properties of flexibility, gripping and abrasion-resistance which provide good foot extension, good ground traction and a high level of wear resistance;

B
(b) an upper comfort layer located directly beneath the foot, said upper comfort layer having elastic shock-absorption properties and being assembled ~~directly on a surface of an assembly insole of~~ said upper of said boot; and

(c) an intermediate layer of said sole, arranged directly between an upper part of said ground contact layer, by one of its faces, and the lower part

to correct various informalities, including those noted by the Examiner under 35 USC 112. However, applicants do not comprehend why the Examiner considers that the title is not descriptive; clarification would be appreciated.

The drawing objection under 37 CFR 1.83(a) is also not clear, as there appears to be no convenient way to illustrate the increasing density of the flexible material of the comfort layer. Reconsideration of this requirement would be appreciated.

The Examiner has alleged a lack of enabling disclosure relating to the manufacture of the comfort layer. Applicants consider that those skilled in the art of making shoe and boot soles are fully cognizant of the materials to be used to achieve the required properties of all the layers of the sole of the invention, including the variable density of the flexible material used for the comfort sole, as claimed in claim 28. The Examiner is respectfully requested to reconsider this objection under 35 USC 112, first paragraph.

The Examiner has rejected claims 1, 4 and 22 to 16 (26?) under 35 USC 102(e) as being fully met by Nichols.

Nichols discloses a multilayer sole construction for an athletic shoe in which a stiffening board member 14 is provided between an outsole 12 and midsole members 22, 24. This sole is for an athletic shoe and the problem solved is specific to such a shoe. Member 14 does not affect the flexibility of the front portion 20 of the foot because member 14 is short and terminates just behind the ball of the foot. Member 14 does not substantially extend along the complete length of the outsole 12, and is not very rigid because it is made of board.

By contrast, the intermediate layer 9 of the present invention is as long as the outer layer 7, and provides the necessary rigidity over the entire sole length.

One important aspect of the present invention is the combination of a stiffening layer with a soft or comfort layer 8. The stiffening layer 9 made of a composite material is as near as possible to the contact layer 7, and the comfort layer 8 stays in contact with the foot. Such a structure makes it

possible to combine good contact and rigidity with foot comfort. The complete energy absorbing or comfort layer 8 lies between the foot and the stiffening layer 9.

The Examiner has further rejected claims 1, 4, 22, 25 and 26 under 35 USC 102(b) as being fully met by Lin.

Lin shows a midsole insert 10 placed above an upper surface 18 of an outsole 14, for an activewear shoe 12. A reinforcing layer 31 is affixed as by gluing to outsole upper surface 18. The layer 31 is made of leatherized paper or cardboard and thus cannot have high rigidity, more especially because cardboard is able to absorb moisture and then becomes very soft.

A peripheral member 22 both retains insert 10 and provides structural support for a peripheral area of the shoe to compensate for the loss of rigidity created by the receptacle 28. The insert 10 comprises an upper base member 32 and a plurality of support elements 34 that are preferably formed integrally with base member 32 to depend therefrom. Accordingly, the sole of Lin is very different from the present invention, and cannot have the same rigidity as the intermediate layer 9 of the invention, which is made of a composite material.

It is noted that Lin himself explains (at column 3, lines 30 to 32) that the purpose of layer 31 is to replace torsional strength lost by the creation of receptacle 28 in midsole member 22. There is therefore no intent in Lin to achieve a stiffer sole; the sole object is to achieve the same rigidity as with normal running shoes, and to compensate for the loss of rigidity created by receptacle 28. The rigidity properties of the cardboard layer 31 vary over time, so that it would not be possible to anchor inserts in such a layer, as can be done in the intermediate layer 9 of the invention.

Lin provides athletic or other activewear shoes which may be relatively soft because they are used for walking, running and the like, while applicants' invention is designed most notably for mountain sports, e.g., cross-country skiing, Nordic hiking and mountain hiking in general, and hence requires a very rigid sole compared with that of Lin.

The Examiner has rejected claim 2 under 35 USC 103 as being unpatentable over Nichols in view of Hiles.

Applicants were unable to find in Hiles any basis for the Examiner's assertion that "Hiles teaches a cushioning material for use in an athletic shoe", and would appreciate being referred to the relevant disclosure. As explained at column 1, lines 4 to 12, Hiles relates to energy absorbing materials for use in automobile bumpers and other devices intended to protect against damage due to impact, shock or collision, and for use in the absorption of sound. Upon impact, elastomeric layer 1 will deform first and absorb all low energy impacts. Heavier impacts deform the less compressible layer 2 and, in extreme cases, fracture the hollow bodies 3.

The structure and function of Hiles are completely different from those of the invention, and it would not occur to those skilled in the art to choose the materials used in the reference to solve the problem of producing a shoe sole adaptable to various sports, for several reasons:

The abrasion and weather resistant skin 4 of Hiles are of no use in a shoe.

The metal backing plate of Hiles, unlike applicants' intermediate layer, does not allow for the selection of varying degrees of stiffness, and elastomeric layer 1 of Hiles, unlike applicants' comfort layer, does not provide comfort.

The density of the material used by Hiles does not increase from the upper to the lower surface; there are merely different layers of different density juxtaposed side by side. Contrary to the Examiner's suggestion, to provide a shoe with a comfort layer of increasing density does not add stability to the shoe. Applicants' intermediate layer does so only because it has different and suitable selected stiffness values.

The Examiner has further rejected claims 3 and 19 to 21 under 35 USC 103 as being unpatentable over Nichols in view of Banich et al.

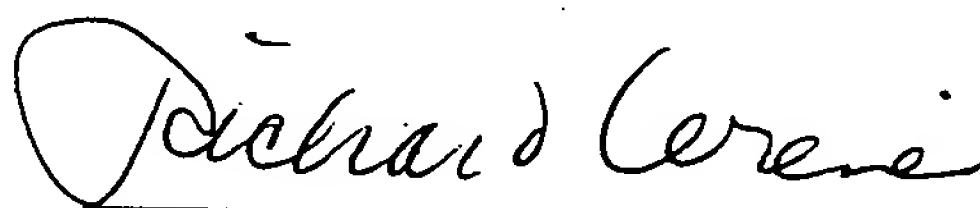
Banich discloses an athletic shoe having an outsole 18, an upper 12, and a midsole subassembly 16 therebetween, formed of several components bonded into an integral structure. The shoe has a lower layer composed of a rear

portion 40 and a toe-off pad 42. This rear portion 40 extends from the rear of the shoe toward the toe of the shoe, but terminates short of the front end of the shoe in a tapered front zone. Bonded to the upper surface of portion 40 is an upper layer 44, elevating the heel of the foot and tapering downwardly forwardly under the instep of the foot to terminate short of the ball of the foot and short of toe-off pad 42. At the heel of the upper layer, it forms a roll bar wedge of overlying, laterally tapered wedge portions of different density.

Those skilled in the art would have no inducement to combine the disclosures of Nichols and Banich, if only because the Banich shoe is intended for sports involving running, and thus is adapted to motions entirely different from the trekking and cross-country skiing motions for which applicants' invention is intended. It is noted that the invention does not involve tapered zones or a roll bar wedge as shown in Banich. Moreover, it would not be obvious from the references, considered singly or in the cited combination, to identify the optimum or workable ranges of properties for which suitable materials must be selected for each of the sole layers.

The claims in their amended form are deemed to distinguish patentably over the art of record, and their allowance is accordingly solicited.

Respectfully submitted,



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28. In a sport shoe comprising an upper, a sole made from a laminated profile comprising several layers performing distinct functions, respectively, said sole being surmounted by said upper, wherein said sole comprises at least three layers external to said upper, namely:

- (a) a ground contact layer with determinate properties of flexibility, gripping and abrasion-resistance which provide good foot extension, good ground traction and a high level of wear resistance;
- (b) an upper comfort layer located directly beneath the foot, said upper comfort layer having elastic shock-absorption properties and being assembled on said upper of said shoe; and
- (c) an intermediate layer of said sole, arranged directly between an upper part of said ground contact layer, by one of its faces, and the lower part of said comfort layer by its other face, having controlled torsional and flexional rigidity, and providing both for the distribution of shockwaves and stresses sensed by said ground contact layer and for their diffusion over said comfort layer before coming in contact with the foot, said intermediate layer extending over substantially an entire surface of said ground contact layer which is located directly beneath a foot of a person wearing the sport shoe, and constituting a framework for the ground contact layer preventing deformation of the ground contact layer and thereby permitting it to be made of softer, more adherent rubber.

29. In a sport shoe comprising an upper, a sole made from a laminated profile comprising several layers performing distinct functions, respectively, said sole being surmounted by said upper, wherein said sole comprises at least three layers external to said upper, namely:

- (a) a ground contact layer with determinate properties of flexibility, gripping and abrasion-resistance which provide good foot extension, good ground traction and a high level of wear resistance;
- (b) an upper comfort layer located directly beneath the foot, said upper comfort layer having elastic shock-absorption properties and being assembled on said

upper of said shoe; and

- (c) an intermediate layer of said sole, arranged directly between an upper part of said ground contact layer, by one of its faces, and the lower part of said comfort layer by its other face, having controlled torsional and flexional rigidity, and providing both for the distribution of shockwaves and stresses sensed by said ground contact layer and for their diffusion over said comfort layer before coming in contact with the foot, said intermediate layer extending over at least a [an entire] surface of said ground contact layer which is directly beneath a lateral portion of a heel of a person wearing the sport shoe, and constituting a framework for the ground contact layer preventing deformation of the ground contact layer and thereby permitting it to be made of softer, more adherent rubber.